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ABSTRACT

Surveys of selected area employers and high school seniors were conducted by Stark Technical College (STC) in 1979 as part of a marketing research project designed to forecast future educational needs. The student survey involved the selection of five area high schools representing urban, suburban, rural, public, and private institutions. The 1,174 seniors at these schools were asked to indicate their future occupational and/or educational goals, their familiarity with STC, and their preferences regarding local media. A series of questions was also provided to identify the respondent's sex, ethnicity, and grade point average. The 121 participants of the employer survey, representing private business, government, health care institutions, professional services, and communications, were asked to identify the job categories of their current employees, to project their needs for technically educated employees over the next five years and to indicate their attitudes toward the effectiveness of STC's training. The study report analyzes findings, provides resultant recommendations concerning future curriculum development at STC, and discusses the occupational outlook of its service district based on government, demographic, enrollment, and labor force data. The questionnaires and a bibliography are appended. (JP)

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STARK TECHNICAL COLLEGE

The Markets of the 1980's

Stark Technical College
April, 1980

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PREFACE

This study was conducted with funding from Grant G007901635 from Title III, Strengthening Developing Institutions Program, U.S. Office of Education, Department of Health, Education and Welfare.

The project was led by Dale A. Young, E.D., Coordinator of Research and Planning and was guided by a committee consisting of Fred A. Yenny, President; Ronald E. Armitage, Director of Student Services; Raymond H. Schilling, Director of Administrative Services; Wallace C. Hoffer, Coordinator of Admissions, and Harold J. Gibbs, Counselor, Department of Student Services. Pamela S. Weaver, Coordinator of Development, assisted the project by coordinating its business aspects.

Community Services Associates, a North Canton Consulting firm provided the research design and implementation.

INTRODUCTION

Stark Technical College began as the Canton Area Technical School in 1960 and became the Stark Technical College in 1970. During the ensuing decade, the College has shown the need for its services through rapid student population growth and through a high placement history for its graduates. The high degree of placement success is illustrated in Tables 1 and 2. As they show, 100% of Stark Technical College graduates were placed in their fields in Banking/Finance, Drafting and Design, Engineering Modeling, Legal Secretarial, and Mechanical Engineering courses with a high placement record in the rest of the courses.

The College grew from less than 100 students in 1970 to 2566 in Fall, 1979. In 1979, it showed a total of 1231 part-time students in credit courses, 866 full-time credit students and 469 registered in continuing education courses. This growth during the decade has been faster than all projections made by the College or by outside sources.

In addition to these changes in total student population, there has been a shift in the constituency of the College toward more women, older students and part-time students.

Faced with this increasing demand for its services from both students and from area employers, but being cognizant of the declining pool of eighteen-year-olds in the population, Stark Technical College applied for a grant from Title III, Strengthening Developing Institutions Program, U.S. Office of Education, Department of HEW. The purpose of the grant was to assist the College in developing a long-range plan through several methods. One of those methods was to be a marketing study of both the high school seniors and the major employers in Stark County.

One study sought to learn what the high school seniors plan to do after high school, what their education and career objectives are, what methods they used to come to their decisions and which media was more influential on their choices.

The other study was aimed at the personnel directors of the major employers in the Stark County area. They were asked to project their need for employees over the next five years, their opinion of the education being offered by Stark Technical College and their interest in continuing education activities for themselves and their employees.

The major objectives of these two studies was to adapt the educational program of Stark Technical College to the changing needs of the major employers in the County, and to communicate with potential students about the employment outlook and the viability of Stark Technical College as an educator of needed technicians.

Table 1

PERCENTAGE OF PROGRAM GRADUATES PLACED IN OCCUPATIONS RELATED TO TRAINING

	1971	1972	1973	1974	1975	1976	1977	1978	1979
Accounting			100	68	74	93	100	81	93
Banking/Finance					100	38	100	73	100
Business Management				100	80	71	69	68	68
Civil Construction					73	87	100	91	76
Computer Programming					79	91	76	87	95
Court/Conference								100	*
Drafting & Design			100	91	73	100	91	90	100
Electrical Engineering	53	47	92	100	60	100	100	100	82
Electronic Engineering					57	65	80	86	58
Engineering Modeling								100	100
Executive Secretarial			100	100	100	63	93	89	81
Fire Science							100	100	80
Legal Secretarial				33	100	57	100	88	100
Mechanical Engineering	44	82	100	94	59	100	100	89	100
Medical Assisting									70
Medical Records									67
Retail Marketing			100	100	67	89	76	92	75
Medical Secretarial				50	50	67	63	75	50
Bookkeeping (1 year certificate)									80

*no graduates in 1979

Table 2

ANNUAL PLACEMENTS IN OCCUPATIONS RELATED TO TRAINING

	1971	1972	1973	1974	1975	1976	1977	1978	197
Accounting			6	13	14	13	18	26	14
Banking/Finance					4	3	3	8	5
Business Management				3	12	12	20	28	21
Civil Construction					8	13	12	10	13
Computer Programming					11	20	13	13	18
Court/Conference								1	
Drafting & Design			10	10	11	10	21	9	5
Electrical Engineering	8	7	11	17	3	7	10	10	14
Electronic Engineering					8	11	16	19	7
Engineering Modeling								3	1
Executive Secretarial			7	9	7	5	25	8	17
Fire Science							5	4	4
Legal Secretarial				2	1	4	2	7	3
Mechanical Engineering	8	9	8	17	10	11	14	17	26
Medical Assisting									7
Medical Records									4
Retail Marketing			3	11	12	16	13	11	6
Medical Secretarial				1	1	4	5	3	1
Bookkeeping (1 year certificate)									4

SEARCH OF LITERATURE

In order to properly address the question of marketing the program of Stark Technical College, it is necessary to review other studies and reports to determine the general atmosphere of the nation, state and county for the type of education which Stark Technical College offers. The following are summaries of pertinent information which was gleaned from a search of the literature done especially for this study.

The Stark County Regional Planning Commission produced a document called "Stark Facts" in the Summer of 1979 in which it summarized various measures and projections of demographic characteristics of the County. The following is a summary of demographic information pertinent to this study from that report.

Population

The commission estimates that the total population of the county grew from 372,210 in the 1970 Census to 395,000 in 1979, an increase of 6% over that period. This increase is based on a net increase of births over deaths and a net inmigration during the period.

The following table shows where the major population concentrations are located:

Cities		
Alliance	25,650	
Canton	100,500	
Louisville	8,510	
Massillon	34,210	
North Canton	16,640	
		185,510

Villages		19,100
Townships		
Canton	17,160	
Jackson	26,700	
Lake	17,400	
Perry	31,200	
Plain	35,020	
Others	65,910	
		190,390
	Total County	395,000

The Regional Planning Commission projects that the total county will grow to about 483,000 people by the year 2000. In the same projection, they estimate that the cities will grow by about 10%, the villages by about 39% and the townships by 33%. The bulk of the growth will take place in the townships, which are projected to grow by about 62,000 persons.

Births

The following table shows the steady decline in births in Stark County in the past eight years.

Year	Births
1970	6878
1971	6412
1972	5628
1973	5338
1974	5359
1975	5265
1976	5146
1977	5151
1978	5125

Age Distribution

According to the "1979 Survey of Buying Power", Stark County had an age distribution as follows:

Age	Percent of Population
0-17	27.3%
18-24	12.4%
25-34	14.0%
35-49	15.4%
50 and over	30.9%

High School and College Enrollment

In 1978 the American College Testing Program collected national statistical data for two-year institutions, analyzed it, and made projections. The publication includes all tables for reporting data and draws the following conclusions:

- In 1986, high school graduates may be down by almost 15% from 1978 figures.
- Women continue to outgain and now outnumber men - 51.5% of total enrollment.
- Part-time students show sharp rise in enrollment percentage.
- Competition with 4-year institutions for full-time students will become increasingly intense in the 1980's.

This is supported by The National Center for Education Statistics. In the report of projections for 1986-87, the point is made that 70% of the part-time enrollment increase from 1972-76 has occurred in two-year institutions and projections are based on assumptions that the number of older students will increase over the next ten years.

The Ohio Board of Regents projects a state-wide decline in high school graduates from 1980-93 of nearly 32%. Locally, the area to diminish the most is Summit County, with a projected decline in graduates of 47%, or a predicted total of 4,250 by 1993. Carroll County, on the other hand, will show a 10% increase according to the Board. Stark County will decline from 6,041 in 1980 to 4,250 in 1993. Related data published by the Board projects college enrollments to drop in a similar fashion, with the exception again of Carroll County, where the number of students enrolling in college will increase. This is additionally interesting in light of the fact that there are no institutions of higher education in Carroll County.

According to "Stark Facts" published by the Regional Planning Commission in the Summer of 1979, The school population (Grades 1 through 12) of Stark County has declined from 95,174 to 85,519 in 1978, a decline of about 10.5%. The largest school districts are as follows:

Canton	15,502
Plain Local	8,297
Perry Local	6,288
Massillon City	5,667
Jackson Local	5,288
Alliance City	5,091

Catholic schools in the county make up 6691 of its students.

The following are the populations of the colleges in Stark County in 1979:

Stark Technical College	2566
Kent State University - Stark County Branch	1976
Mount Union College	1020
Malone College	782
Walsh College	690

Of those graduating locally, Stark Technical College seems to be a popular choice. The American College Testing Program reports that of the 1979-80 college freshman group, 37% list the College as a first choice, 36% as second choice, and 23% as third choice.

Income

According to the "1979 Survey of Buying Power", Stark County had a median household Effective Buying Index of $17,757, compared with an EBI of $17,480 for Ohio.

Job Trends

The ability of institutions to place students in jobs for which they are trained is a powerful recruiting tool. In order to take full advantage of this strength and also to be responsive to local needs, institutions must keep constantly in touch with national, state, and local job trends and projections.

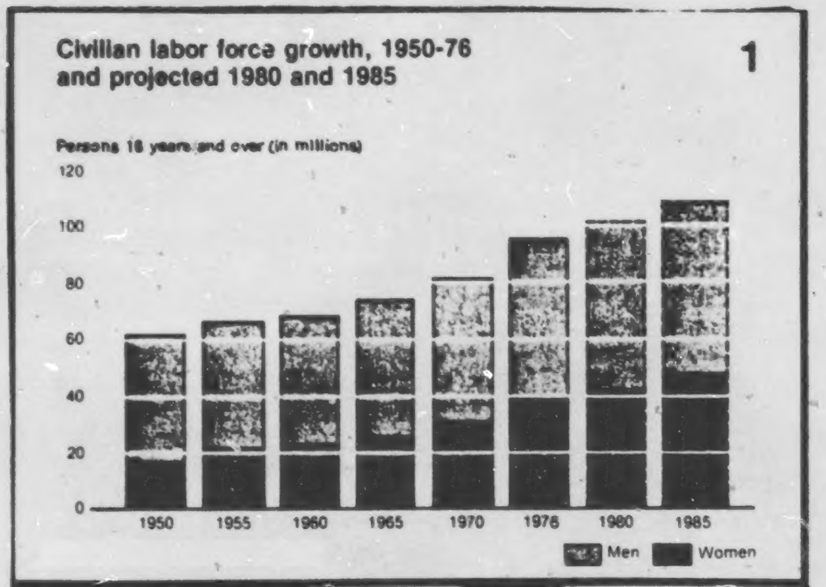
The Bureau of Labor Statistics projects that employment growth will vary widely by industry though 1985, with services showing the greatest degree of growth and agriculture losing rather than gaining. The shift toward while-collar occupations will continue, and the percent of women in the labor force will grow. The largest growth in employment among occupational groups will occur in clerical fields, but all groups show some growth with the exception of private household workers and farm workers.

A series of graphs follow which show predictions made through 1985 by the Bureau of Labor Statistics. Similar up-dated information will appear in the 1980 edition of the Occupational Outlook Handbook, soon to be published.

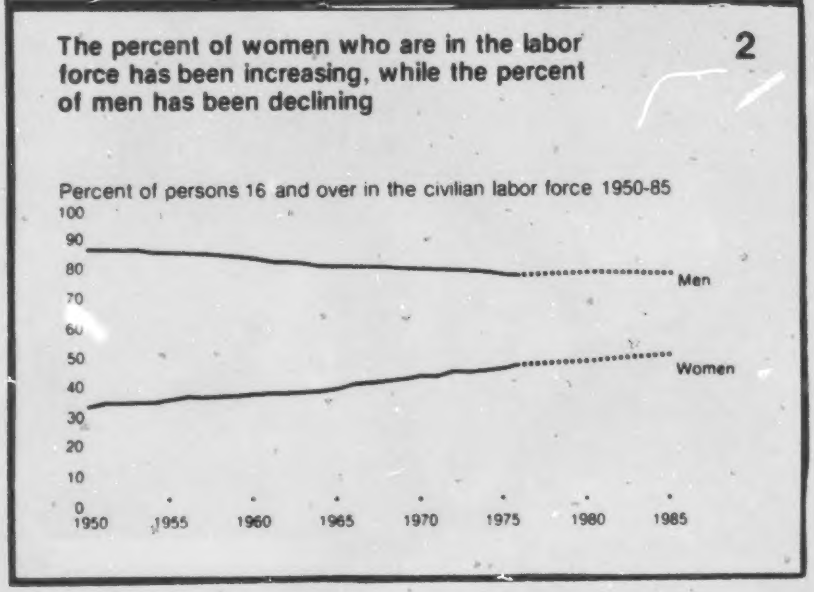
Graphs one and two show projected numbers (1) of both men and women in the civilian labor force through 1985 and the percentage (2) of each. Based upon trends over a twenty-five year period, it is anticipated that the percentage of women will continue to increase, while the percentage of men will continue to decrease.

Graphs 1 and 2

SOURCE: Bureau of Labor Statistics



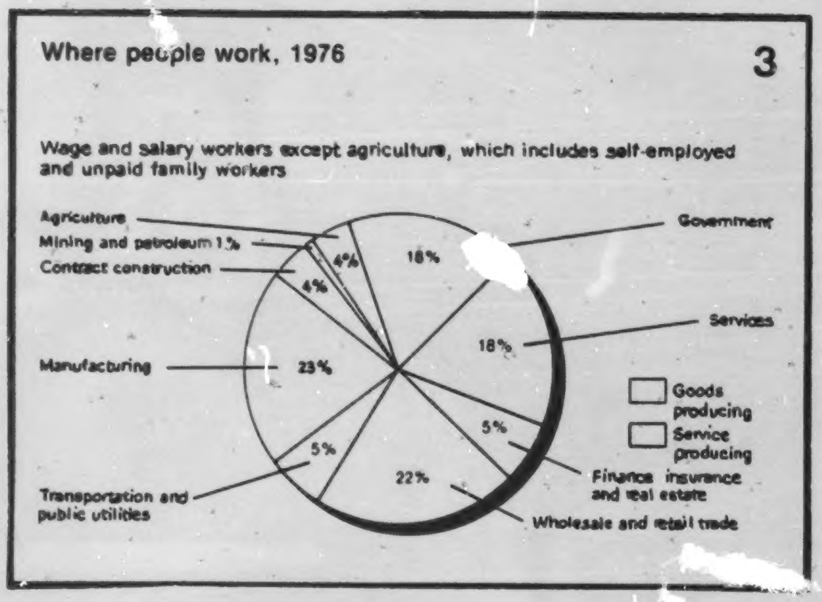
Civilian labor force growth, 1950-76 and projected 1980 and 1985



The percent of women who are in the labor force has been increasing, while the percent of men has been declining

Graph three, indicating where people worked in 1976, shows largest employment in manufacturing, trade, services, and government; with lowest employment in mining, construction, and agriculture. The new edition may reflect more recent shifts due to energy needs.

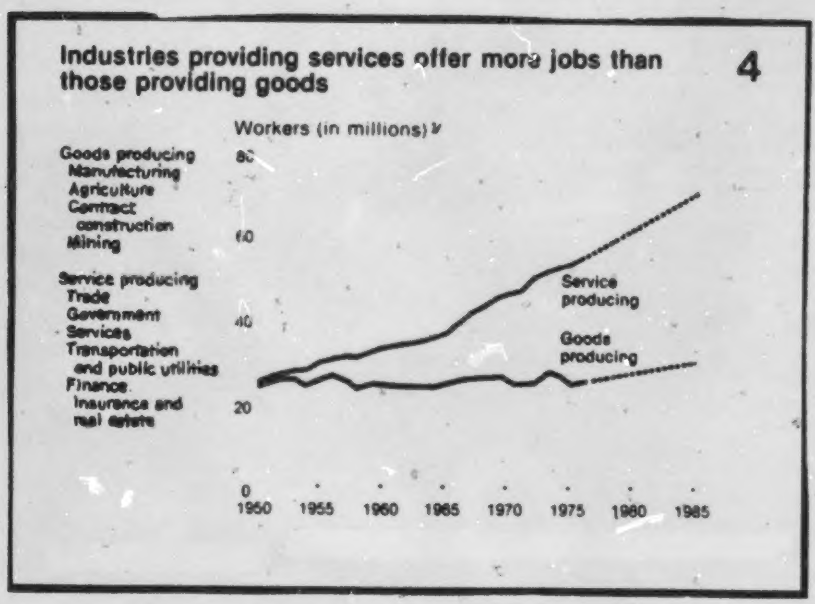
Graph 3



Source: Bureau of Labor Statistics

Based on twenty-five year data, service industries are projected to offer more jobs than those producing goods. Graph four shows the relative projected increase for each. Industries listed on the left of the graph serve merely as an explanation and are not related to the vertical numbers except as part of the general headings on the graph itself (service, goods).

Graph 4

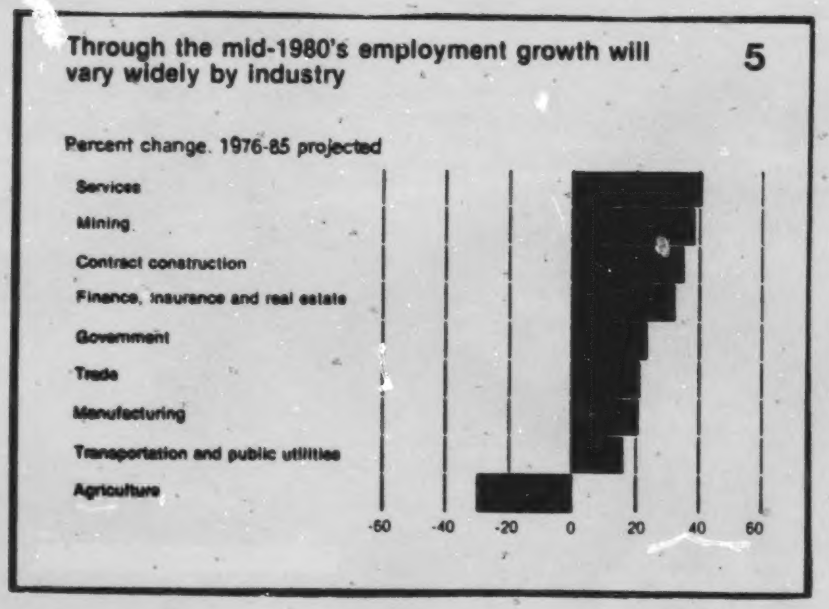


1/Wage and salary workers except agriculture which includes self-employed and unpaid family workers

Source: Bureau of Labor Statistics

Graph five shows the percentage of change in employment growth through 1985. Largest growth (40%) will occur in service industries, with a substantial decline (30%) in agricultural industries.

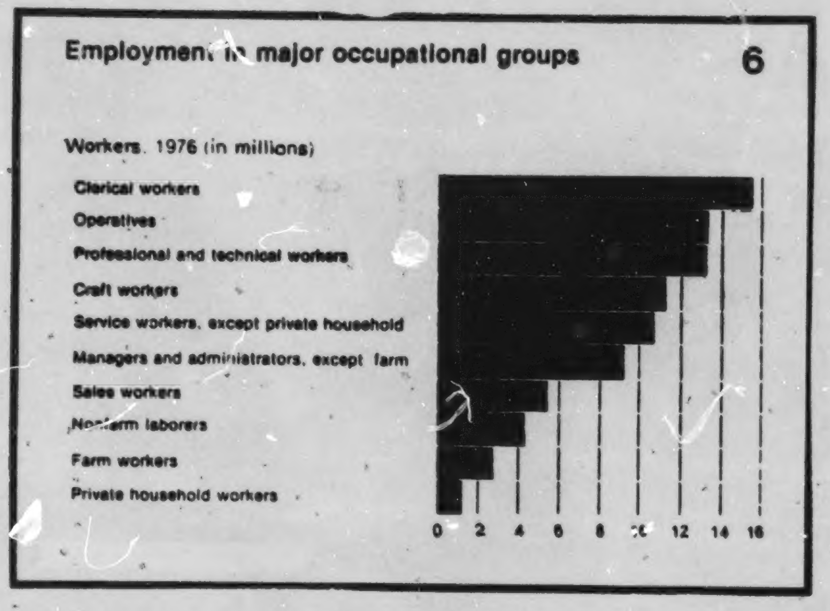
Graph 5



Source: Bureau of Labor Statistics

In graph six division among major occupational groups is shown for 1976, with greatest numbers of people employed in clerical occupations and least as household workers.

Graph 6

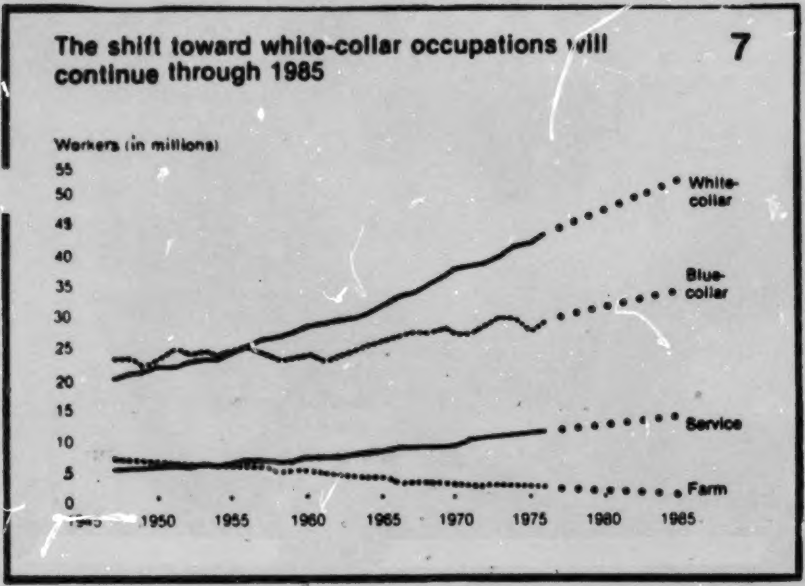


Source: Bureau of Labor Statistics

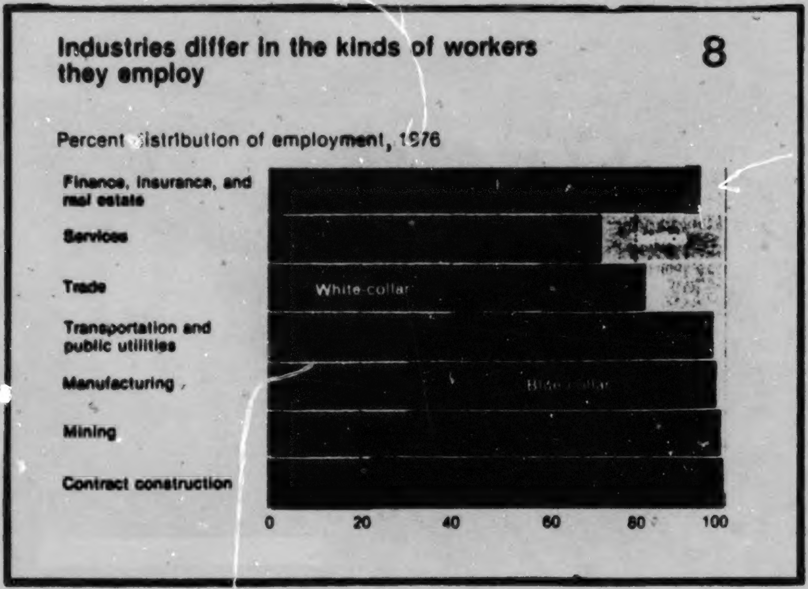
Graphs seven and eight show comparisons for blue and white collar employment. An overall continued shift toward white-collar occupations is projected through 1985 (7); but as of 1976, there were differences among various kinds of industries with regard to the percentage of white collar workers they employed, with finance and real estate employing the greatest percentage of white collar workers and construction the least (8).

Graphs 7 and 8

Source: Bureau of Labor Statistics



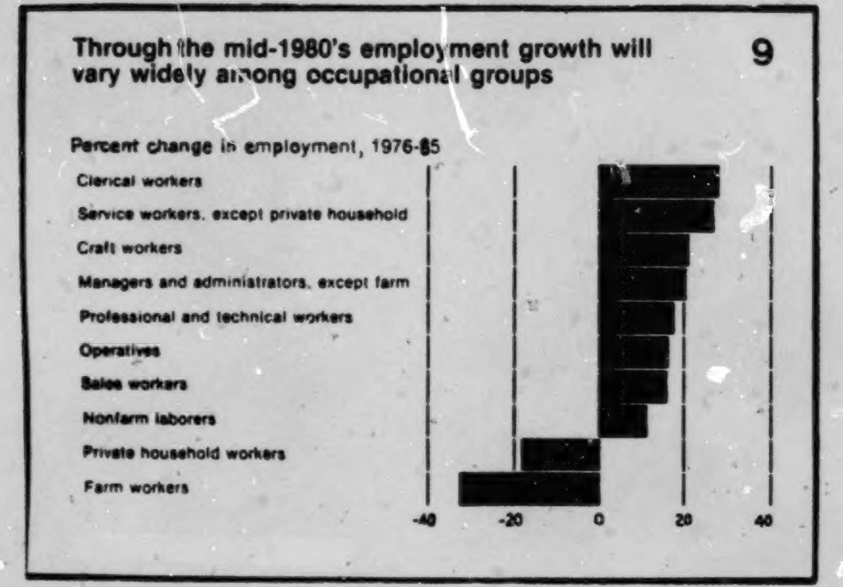
Note: 14- and 15-year olds are included prior to 1958 only

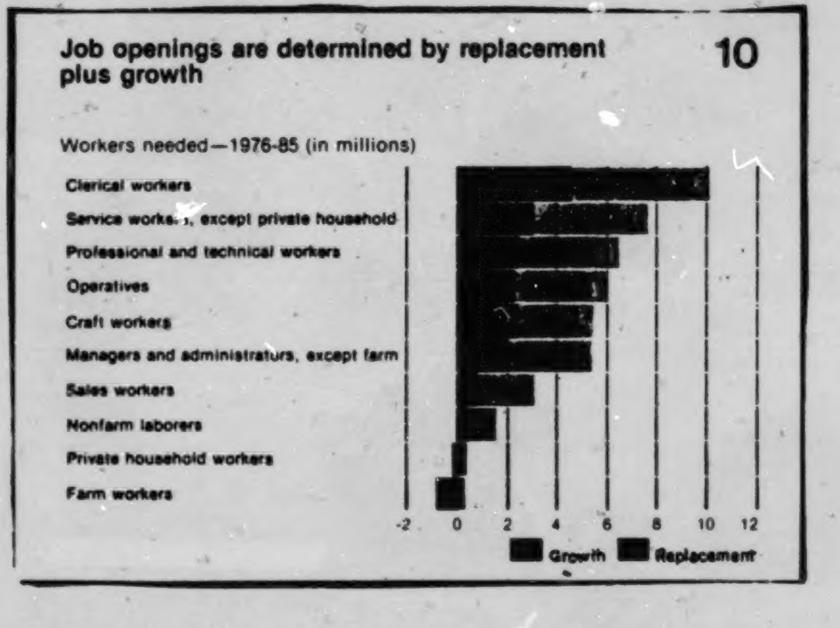


Graphs nine and ten describe employment growth by occupational group (9) and whether that growth will be determined by replacement needs or actual new positions (10). Clerical and service workers head all lists.

Graphs 9 and 10

Source: Bureau of Labor Statistics

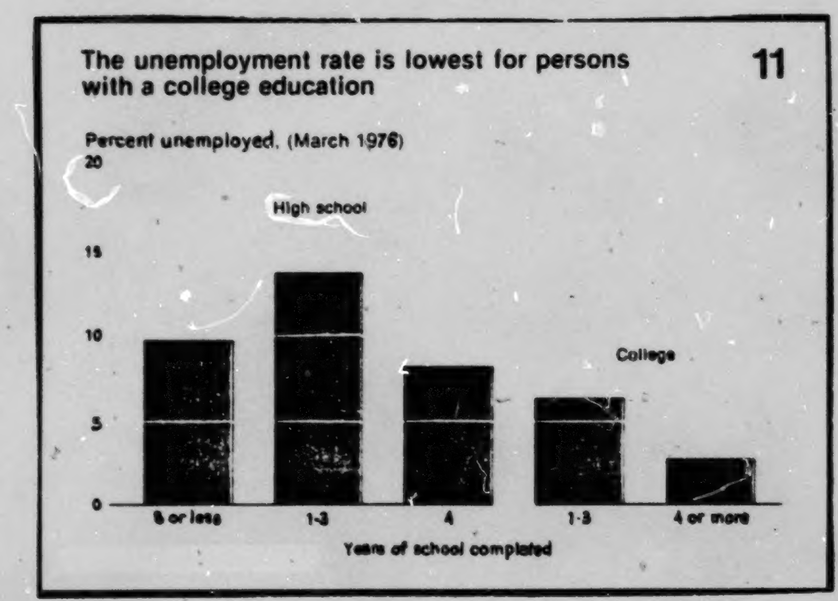

Through the mid-1980's employment growth will vary widely among occupational groups


Job openings are determined by replacement plus growth

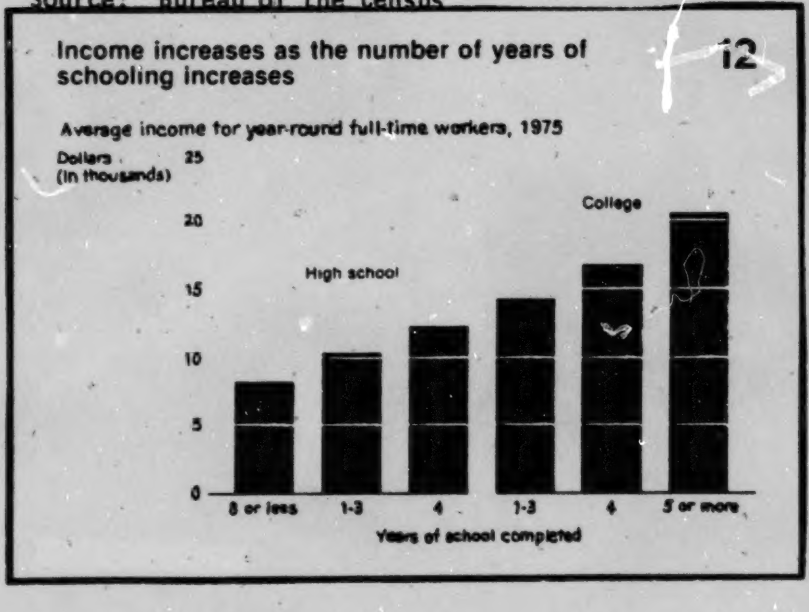
The last two graphs express benefits of education related to unemployment and income. Unemployment rate is lowest for people with a college education (11) and income possibilities are greater with additional years of higher education (12).

Graphs 11 and 12

Source: Bureau of Labor Statistics



Source: Bureau of the Census



A table prepared by the Ohio Bureau of Employment Services appears on the next page. While manufacturing is a very important component of the non-agricultural labor market in Stark and Carroll Counties with 59,900 employees, non-manufacturing employees (103,100) outnumber them by 72%

The principal source of non-manufacturing jobs are retail trade, services, and government. The major employer's in the manufacturing sector are primary metal industries and fabricated metal products.

There was little change in employment in any of the categories from the previous year. The Ohio Labor Market Bulletin accompanying the table stated that unemployment in the area was 5.7% of the civilian labor force, so the figures are descriptive of a fairly well saturated labor market. Shortage occupations in the same bulletin were described as "plant and project engineers, tool designers, foundry metallurgists, insurance agency managers, housing management officers, programmer-analysts, key-punch operators, secretaries, bookkeepers, occupational and physical therapists, swim coaches, disk jockeys, wood patternmakers, mold makers, auto mechanic apprentices, security guards and road laborers".

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT IN CANTON METROPOLITAN AREA

Industry	Employment (in thousands) August 1979	Percent Change from July 1979
Total	162.9	- .2
Manufacturing	59.9	- .2
Durable Goods	47.3	.0
Stone, clay and glass products	2.4	- 2.8
Primary metal industries	15.9	- .7
Fabricated metal products	10.4	1.4
Fabricated structural metal products	3.2	- .1
Nondurable Goods	12.6	- .8
Food and kindred products	4.4	- .5
Rubber and misc. plastics products	3.7	- .3
Nonmanufacturing	103.1	- .2
Mining	1.2	- 1.0
Construction	7.4	- 2.3
Transportation and Public Utilities	7.5	.4
Communication, electric, gas services	3.1	.1
Wholesale Trade	7.5	- .7
Retail Trade	28.3	.3
Finance, Insurance, & Real Estate	6.0	.1
Services and Miscellaneous Industries	28.8	- .2
Government	16.3	- .2
Local government (includes education)	13.2	.1

Source: Division of Research and Statistics
Ohio Bureau of Employment Services
Columbus 43216

Employment in Manufacturing

The "Ohio Industrial Directory" for 1978 gives the following listing of the number of firms and employees in manufacturing in Stark County.

	S.I.C.*	Firms	Employees
Food	20	52	4,277
Apparel	23	20	840
Lumber, Wood	24	23	698
Printing, Publishing	27	53	1,657
Chemicals	28	20	693
Rubber, Plastics	30	28	3,156
Stone, Clay, Glass	32	36	2,156
Primary Metals	33	30	12,380
Fabricated Metals	34	91	7,704
Nonelectric Machines	35	86	14,275
Electric Machines	36	22	6,055
Misc. Manufacturing	39	22	330
Others	--	58	2,288
TOTALS		541	56,509

*Standard Industrial Classification

The table shows that non-electric machines, primary metals, electric machines, and food are the major manufacturing industries in the county, in that order.

"Ohio Labor Market Information," September, 1979 listed the following shortage occupations for the Canton area:

1. Electrical engineers
2. Pollution engineers

3. Tool designers
4. Foundry metallurgists
5. Programer-analysts
6. Medical technologists
7. Dental-laboratory technicians
8. Vocational rehabilitation counselors
9. Physical therapists
10. Licensed practical nurses
11. Sales managers
12. Insurance sales agents
13. Bookkeepers
14. Wood patternmakers
15. Machinists
16. Millwrights
17. Electronics
18. Boilerhouse mechanics
19. Engine repairers
20. Arc welders
21. Security guards
22. Tree pruners

The list reflects the greatest need to be in technical areas. On the other hand, the largest number of local prospective college students, when questioned by the American College Testing Program, indicated that they planned to study business curricula. Of the 492, 1979-80 freshmen not yet enrolled, 60 listed a vocational first choice in Accounting, 29 in Business Management, and 70 in Secretarial Studies. Technical fields were less popular, with 29 students planning to go into electricity, electronics engineering; and 46 into some kind of computer field. Other areas were widely distributed.

Placements - Ohio Technical College Students

The Ohio Department of Education has done a statewide follow-up survey of those who, having completed vocational post-secondary programs, were employed full time in the field in which they were trained. This data for the school year 1977-78 appears in the following tables. Programs listed are divided into those included in Stark Technical College Curricula and those which are not.

Programs Offered at Stark Technical College

Program	Total Graduates Available in Ohio	Employed in Field	%
Restaurant/Food Management	80	55	68.8%
Retail Marketing	111	78	70.3%
Real Estate	83	50	60.2%
Medical Assisting	41	36	87.8%
Medical Records	24	11	45.8%
Accounting	291	224	77.0%
Data Processing	215	167	77.7%
Court/Conference Reporting	8	8	100 %
Business Management	92	71	77.2%
Secretaries	402	305	75.9%
Automotive Technology	38	29	76.3%
Civil Technology	54	51	94.4%
Electrical Technology	134	123	91.8%
Electronics Technology	119	109	91.6%
Mechanical Technology	52	49	94.2%
Fire/Safety Technology	7	3	42.8%
Drafting	23	22	95.7%

Programs Not Offered at Stark Technical College

Program	Total Graduates Available in Ohio	Employed in Field	%
Dental Hygiene	132	101	76.5%
Medical Laboratory Technology	70	59	84.3%
Radiologic Technology	94	74	78.7%
Inhalation Therapy	124	115	92.7%
Child Care	164	117	71.3%
Food Service	89	61	68.5%
Environmental Control	51	48	94.1%
Police Science Technology	145	102	70.3%
Mechanical Design Technology	60	55	91.6%
Welding & Cutting	192	130	67.7%

Program Modification

In the light of these declining enrollment sources, educational experts nationally and at the state level have practical recommendations to make regarding programming and its relevance in a shrinking market. The point is made that 18-22 year olds make up only 9% of the population, while 23-29 year olds are 59%. The older part-time student is the new constituency for institutions and will require a different climate and different procedures. Expanding technology renders the training of people obsolete in a few years and performance rather than grades will need to be emphasized (i.e. competence must be judged by actual ability to perform rather than by being able to answer theoretical questions about the skill on a test). Recommendations for changes to meet the needs of this older, part-time constituency include:

1. Modified or waived entrance requirements.
2. Special counseling.
3. New faculty productivity.
4. External certificates and degrees.
5. New methods of instruction.
6. Weekend courses.
7. Colleges without walls (placing community based education in storefronts, factories, offices, homes, libraries)
8. Increased community in-put through committees and research.

The Ohio Technical and Community College Association has made recommendations that, if followed, will support many of the above innovations. These include:

- o Continued emphasis on, and support for, associate degree programs and technical education, including a ceiling, but preferably a reduction, on tuition and fees as well as strengthening of the concept that it is uniquely the mission of the two-year college to offer individual occupationally-related courses, associate degrees, post associate degree work less than baccalaurate, and programs of less than two years duration.

- o Additional funding to provide two-year college students, among other advantages, broad range counseling, more individualized and developmental instruction, and, for the handicapped, improved training and programs.

- o Establishment of the principle of "equal subsidy for equal educational service delivered," regardless of the location of the service or the kind of public institution delivering it.

- Board of Regents support for maximum utilization of two-year colleges, as well as support for the concept of off-campus satellite courses.

- Opportunity for clear, firm, and continuous advice and support from two-year college presidents and trustees to the Board of Regents on matters affecting higher education.

- Inclusion of appropriations in legislation passed while the state biennial budget is in effect to support the costs of additional mandated educational activities.

- Board of Regents establishment of the concept that job placement is as important as job training coupled with the development of a statewide system of information centers to make potential students knowledgeable about job opportunities.

- Financial support for the Chancellor's Advisory Committee on Instructional Development to institute and conduct professional activities that encourage and emphasize increased teaching effectiveness.

- Strong support for specific and extensive evaluation of the total management of higher education. But it strongly recommends that any such evaluation emphasize the continued control and autonomy of local boards of trustees.

- Funding for non-credit occupationally-related courses, apprenticeship programs, and other approved non-credit courses and programs of less than two years duration offered at Ohio's two-year colleges in accordance with their mission of providing citizens lifelong learning opportunities.

The American College Testing Program further supports the emphasis on innovative and flexible programming for the encouragement of enrollment. Specific comments and suggestions are:

- Historically, 2 year units have emphasized service -- open access, low fees, quality counseling, good teaching, flexible programming, transfer options, special career education. These must continue as high priorities for the 2-year schools to attract the proportion of full-time students essential to institutional viability.

- 2-year institutions must undertake probing, pioneering, and innovative programs and approaches to academic and administrative management.

- There will be an ongoing demand for career education programs and their adaptation to the changing social and economic needs of the future. In the 1980's when there will be fewer students to fill available spaces, there will be greater cause for programs to be relevant to changing circumstances of the time.

CAREER ASPIRATIONS OF STARK COUNTY STUDENTS

The survey of high school students was conducted to determine future plans of current high school students regarding occupations and education, knowledge they seem to have about Stark Technical College, and their preferences regarding local media.

Methodology

An Ad hoc committee was established made up of two consultants from Community Services Associates and Stark Technical College personnel representing student services, admissions, institutional planning and research, and administrative services. The committee suggested questions, reviewed, and revised the high school questionnaire. Questions were written to identify data by school, sex, and ethnic group. A series of questions was developed to identify high school program, grade point average, and post-graduation plans by activity, type of institution and program. Several comprehensive lists of occupational clusters were considered to achieve desired results including the Ohio Vocational Interest Survey list of twenty-seven clusters and Holland's Self Directed Search catagorization. The selection was finalized with the list of programs available at institutions of higher education in Ohio. Another series of questions was developed to identify appropriate media for dissemination of information about the College.

The committee then selected specific high schools to participate in the survey. The criteria used were geographic direction; urban, suburban, and rural makeup; and public and private schools.

The following high schools were selected with respective descriptors:

Washington High School - public, urban, western Stark County.

Lake High School - public, suburban, northern Stark County.

Canton South High School - public, rural, southern Stark County.

Alliance Senior High School - public, free standing community, eastern Stark County.

Central Catholic High School - private, central Stark County.

A personal letter was sent by President Fred Yenny to the superintendent of each school district explaining the purpose of the study and requesting their cooperation. A copy of the questionnaire was attached to the letter (see Appendix A).

Questionnaires were pre-tested with ten students of varied ability and some minor changes were made to clarify the questionnaire.

General Description of Sample

The survey was administered to members of the senior class by professional personnel at each of the participating schools. Directions for administration were provided. 1,174 questionnaires were administered of which 1,171 were usable. All students did not respond to all items as Tables 1 & 2 indicate; but of those responding, male-female split was 50%. 90% of the students were white and 10% non-white. Of the non-white sample, 75% were black. When individual questions are analyzed, there is little difference across schools in the way they are answered. Percentages seem to be similar according to responses, so in general the total data is representative of the individuals schools.

Table 1

Sex		
Male	587	50%
Female	582	50%
	1169	

Table 2

Ethnic Group

White	1048	90%
Other	118	10%
	1166	

Students' Current High School Program

42% of both male and female students indicated they were taking a college preparation course (Table 3). The next largest group was in a vocational program with 35% of male students and 28% of female students making that response. A larger percentage of females (17%) were in a business course compared to males (4%). Home Economics, General, and other programs combined represented about 13% of the total group.

Table 3

	Total	Male	Female
College Preparation	42%	42%	42%
Vocational	32%	35%	28%
Business	11%	4%	17%
General	10%	12%	9%
Industrial Arts	2%	4%	1%
Other	3%	3%	3%
		N=581	N=577

Students' Expectations after High School

All students were asked to record full-time post high school expectations (Table 4). 58% of the students said they would seek more education or training, with a slightly higher percentage of girls making that selection than boys (61% and 54% respectively).

Post high school plans of other students indicated that 36% would enter the job market, 3% military service and 3% other unspecified activities. Male-female differences were minimal, with a slightly higher percentage of boys intending to enter the work force than girls (40% and 32% respectively).

Table 4

	Total	Male	Female
More Education	58%	54%	61%
Work	36%	40%	32%
Military Service	3%	4%	2%
Other	3%	2%	5%
	N=1162	N=582	N=580

Type of Training Anticipated by Students

Students who expressed plans for future training were asked to complete an additional set of questions relating to that intention. The questions included type of training sought (Table 5), reasons for choice made (Table 6), potential requests for financial aid (Table 7), persons most influential in educational decision making (Table 8), and current grade point average (Table 9).

The largest group of students planning more training indicated that they would seek it in an institution rather than through apprenticeship or on-the-job-training. Four-year colleges were the most popular choice, with 50% of the females and 56% of the males making that selection. Two-year institutions were more often selected by girls (24%) than boys (18%), and the undecided group represented 14% of the girls and 12% of the boys.

Table 5

	Males	Females
Attend 4-Year College	56%	50%
Attend 2-Year College	18%	24%
Enter Apprenticeship Program	8%	2%
Other	6%	10%
Have Not Decided	12%	14%
	N=378	N=412

Reasons Listed for Choice of Training or Education

Students, who expected to obtain more training or education, were asked to list the three reasons most important in their choice. These students predominantly listed "type of education offered" (75%), "job placement after graduation" (70%), and "quality of education" (63%). If these results are taken seriously, recruiters will endeavor to stress these qualities. Although many students said that they would seek financial aide (68% if they attend a four-year institution and 57% if they attend a two-year institution), this did not appear to influence their choice as much as might be expected. 26% of the students showed this as a reason.*

Table 6

	Number	Percent
Type of Education	505	75%
Job Placement	466	70%
Quality of Education	423	63%
Cost	254	38%
Extracurricular Activities	233	35%
Financial Aide	172	26%
Close to Home	168	25%
Away from Home	85	13%
Other	23	3%

*Multiple reasons were given by most respondents. Percentages were figured on 674 students answering "more education" on Table 4.

Students Expecting To Apply for Financial Aide

Table 7

	2-Year College	4-Year College
Yes	57%	68%
No	43%	32%

Most Influential Factors in Educational Choice

42% of the responding students said that parents were the most influential factor in their educational choice. 12% were influenced by work experience, 12% by activities, 10% by friends, 9% by teachers and counselors, and 3% by recruiters and publications. These results point to the obvious conclusion that recruiting efforts should be directed towards parents to a far greater degree.

Boys and girls agreed that parents were most influential, and influences did not seem to differ a great deal upon the two sexes. On each other item boys and girls were within three percentage points of each other.

Table 8

	Total	Male	Female
Parents	42%	42%	42%
Work Experience	12%	13%	12%
Activities	12%	10%	12%
Friends	10%	12%	10%
Teachers & Counselors	9%	7%	10%
Recruiters & Publications	3%	4%	2%
Others	12%	12%	12%
		N=372	N=407

Current Grade Point Average

Only those seeking more education were asked to record grade point average, and of that group 50% said their grade-point average was between 3.0 and 4.0. 44% of the students said their average was 2.0 to 3.0. A slightly higher percentage of females said their G.P.A. was 3.0 - 4.0 (55%).

Table 9

	Males	Females
3.0 - 4.0	45%	55%
2.0 - 3.0	46%	41%
Below 2.0	9%	4%
	N=378	N=412

Students' Media Preferences in Reading and Listening.

All students in the survey were asked to respond to media questions. Table 10 shows percentages listening to specified stations and Tables 11 and 12 indicate most widely read newspapers and sections within the papers.

Radio

Station WMMS was the most popular radio station of those surveyed and was listed by 49% of the students. Other choices were very diversified, with the next largest group naming WOOS (10%), a station not listed on the form and written in by students. Other stations were each listed by zero to seven percent of the students.

Table 10

WMMS	49%
WOOS	10%
WGAR	7%
WQIO	6%
WWWM	5%
WHBC	3%
WNYN	1%
WHLO	1%
Other	18%
	N=1158

Newspapers

As would be expected, students tended to read the paper indigenous to their own geographic area, i.e.:

86% of Alliance students read the Alliance Review.

91% of Washington students read The Massillon Evening Independent.

74% of Central Catholic students read The Canton Repository.

98% of Canton South students read The Canton Repository.

70% of Lake students read the Akron Beacon Journal, and 30% of them read The Canton Repository.

When the total sample in the study is looked at, the results spread over all papers, with The Canton Repository being the most widely read (37%); The Massillon Evening Independent is next (30%); The Alliance Review and Akron Beacon Journal represent 20% and 12% respectively.

Township papers were read by only three people in the survey.

Favorite Newspaper

Table 11

Canton Repository	37%
Massillon Evening Independent	30%
Alliance Review	20%
Akron Beacon Journal	12%
Other	1%
	N=1148

Largest readership within these papers is directed towards sports (33%) and news (28%) sections. However, the totals do not tell the complete story because the sex of the respondent seems to make a real difference. Girls tend to prefer news sections (32%) and boys say they prefer sports (47%). Comics and entertainment sections are preferred by 15% and 14% of the sample respectively, with 10% preferring other miscellaneous sections.

Favorite Newspaper Section

Table 12

	Total	Girls	Boys
Sports	33%	17%	47%
News	28%	32%	24%
Comics	15%	17%	13%
Entertainment	14%	19%	10%
Other	10%	15%	6%
	N=1169	N=582	N=587

Knowledge about Stark Technical College

Tables 13 - 15 deal with students' knowledge about Stark Technical College.

Degree of Knowledge

Out of the total group, an overwhelming 77% expressed very little knowledge of the College (Table 13). 3% said they knew a great deal. Response percentages were fairly uniform across schools. One can speculate, however, that responses might be similar if students were questioned about any specific institution, and it would be wise to test such a hypothesis before any conclusions are reached regarding this aspect of the data.

Table 13

Very little	77%
Average amount	20%
A great deal	3%
	N=1160

Source of Information About Stark Technical College

They indicated that the knowledge that they did have of the College (Table 14) came primarily from friends (47%). The next greatest information sources were college publications (18%); counselors (14%); radio (10%); and parents and newspapers, 5% and 3% respectively. Of particular interest is the fact that only 5% knew of the College through parents and yet parents were the most influential factor in decision making.

Table 14

Friends	47%
College Publications	18%
Counselors	14%
Radio	10%
Parents	5%
Newspaper	3%
Other	3%
	N=1046

Knowledge of Degrees Offered at Stark Technical College

Table 15 shows that students seem to understand that an associate degree is available at Stark Technical College (66%). Since this question was answered by all students in the survey and not just those planning to go on with their education, this represents a fairly high proportion. 22% of the students thought a bachelor's degree was available and 12% thought no degree could be earned.

Table 15

Associate Degree	66%
Bachelor's Degree	22%
No Degree	12%
	N=1017

Students' First and Second Occupational Choices

All students in the sample were asked to mark their first and second occupational choices. It seems most profitable to look at boys' and girls' choices separately in view of the fact that the majority of students are still pursuing traditional occupations with regard to sexual sterotypes, although individuals are crossing the invisible line. Table 16 (male choices) and Table 17 (female choices) progress from first choice occupations listed most frequently to those listed least frequently. The tables do not list all responses but are limited to those areas which are part of Stark Technical College curricula plus any areas selected by a total (men and women) of twenty-five or more students. Engineering Modeling is not included because, although offered at the College, it did not appear on the questionnaire.

Top five first choice occupations for boys were automobile mechanics, business management, welding, accounting, and electrical engineering, in that order. Top five first choice occupations among girls were secretarial studies, accounting, registered nursing, business management, and computer programming, in that order. The shift in sex sterotyped occupations seems to be most noticeable in the area of business management (first choice - girls, 20; boys, 30; second choice - girls, 16; boys, 16). Computer programming is listed first by twice as many girls as boys (16 and 8 respectively) and second by 16 girls and 10 boys. Occupational choices following sterotypes include secretarial studies (girls' first choice - 60, second choice - 23 and boys - 0); health occupations, which remain predominantly female; and engineering and mechanical occupations, which are primarily male. Radio-Television occupations were selected by almost as many girls as boys (first choice - girls, 11; boys, 15; second choice - girls, 4; boys, 13).

Occupational Choices - Male

Table 16

	First Choice	Second Choice
Automobile Mechanics	31	15
Business Management	30	16
Welding	28	8
Accounting	28	7
Electrical Engineering	22	6
Machine Work	17	16
Mechanical Engineering	17	12
Automobile Body Repair	16	10
Radio/Television	15	13
Construction	13	20
Architecture Technology	12	4
Electricity & Electronics	9	8
Computer Programming	8	10
Marketing & Purchasing	6	2
Computer Operating	5	7
Drafting/Engineering Graphics	4	2
Legal Assisting	4	0
Hotel & Restaurant Management	2	6
Real Estate	2	5
Banking & Finance	2	2
Bookkeeping	1	3
Engineering Technology--Mechanical	1	1
Medical Assistant	1	0
Fire Science	0	4
Office Management	0	3
Secretarial Studies	0	0
Nursing (Registered)	0	0
Court Reporting	0	0
Medical Records Librarian	0	0

Occupational Choices - Female

Table 17

	First Choice	Second Choice
Secretarial Studies	60	23
Accounting	48	26
Nursing (Registered)	35	8
Business Management	20	16
Computer Programming	16	16
Radio/Television	11	4
Banking & Finance	9	11
Legal Assisting	8	9
Bookkeeping	7	16
Marketing & Purchasing	7	7
Medical Assistant	5	6
Court Reporting	4	5
Computer Operating	3	11
Hotel & Restaurant Management	3	5
Office Management	2	11
Real Estate	2	5
Mechanical Engineering	2	1
Automobile Mechanics	2	0
Architecture Technology	1	2
Machine Work	1	1
Drafting/Engineering Graphics	1	1
Welding	1	0
Electrical Engineering	0	1
Electricity & Electronics	0	1
Medical Records Librarian	0	1
Automobile Body Repair	0	0
Construction	0	0
Engineering Technology--Mechanical	0	0
Fire Science	0	0

Boy Scouts of America Explorer Survey

The Explorer Scouting Survey conducted in the schools and the Stark Technical College Survey can be compared. Most often selected first occupational choices in the Scout survey were Secretary (399), Accounting (176), Auto Mechanic (203), Barbering (198) and Nursing (279). It should be remembered that students usually fill out the Scouting survey at a younger age than that of High School Seniors.

SURVEY OF STARK COUNTY BUSINESSES

The survey of Stark County businesses was conducted in order to ascertain the future plans of Stark County businesses concerning their needs for technically educated employees over the next five years. Second, the study attempted to ascertain how the area employers felt about Stark Technical College as a major educator of these employees.

Methodology

A list of the 121 major employers in Stark County was assembled from the roster of the three Chambers of Commerce, from the Yellow Pages of the Telephone Directory and from those businesses currently recruiting students from Stark Technical College. The study was confined to Stark County so that available marketing techniques could be applied to the employers once their needs for technicians were known. The list included private business, government, health care institutions, professional services, and communications.

The questionnaire was developed by Community Services Associates and reviewed and modified by a committee of Stark Technical College made up of representatives of student services, admissions, institutional planning and research, and administrative services.

A personal letter was sent by President Fred Yenny to the Personnel Manager of each business, explaining the purpose of the study and requesting their cooperation. A copy of the questionnaire was attached to the letter. (See Appendix A)

Ten days after the questionnaire was mailed, Community Services Associates personnel made personal telephone calls to all Personnel Managers of firms which had not returned the questionnaires. In the few cases in which they had not received the questionnaire, another one was sent. A second telephone call was made to follow up ten days later. In three cases where important firms had not responded after the second telephone call, the help of the person in that firm who was responsible for recruiting Stark Technical College students was enlisted. In each case, the questionnaire was returned through the efforts of the recruiters. The success of these efforts can be seen by the fact that 112 questionnaires were returned from the 121 sent.

The data were aggregated by the use of the Stark Technical College Computer Center.

Firms Responding

The following is a list of those firms which responded to the questionnaire:

A-1 Truck Service, Inc.
AEP Service Corporation
Affiliated Hospital Prod., Inc.
Akron-Canton Airport
Alliance City Hospital
Alliance Machine Company
Alliance Manufacturing Co., Inc.
American Electric Power
American Steel Foundries
Ashland Petroleum Company
Aultman Hospital
Babcock & Wilcox Company
Belden Brick Company
CADO Business Systems of Ohio Inc.
Central States Can Corp.
Citizens Savings Association
City of Alliance
City of Canton
City of Massillon
Consumer Publishing Company
Danner Press Corporation
Diebold Incorporated
Doctor's Hospital
East Ohio Gas Company
Eaton Corporation
Edmont-Wilson
Ekco Housewares Company
Ernst & Whinney

F. E. Schumacher Co., Inc.
First Federal Savings & Loan Association
Ford Motor Co. - Canton Plant
Frease & Shorr Advertising
Gap, Inc.
Geauga Plastics Company
Gregory Galv. & Metal Proc., Inc.
Harrison Paint Corp.
Harter Bank
Hoover Company
J.C. Penney Co., Inc.
Jackson-Bayley Electric Co.
Kay-Bee Toy & Hobby Shop
Lawrence, Dykes, Goodenberger, Bower & Clancy
Livingston Furniture Company
Luntz Corporation
Manor Care--Belden Village Nursing Center
Massillon Community Hospital
Massillon Steel Casting Co.
McLain Grocery Company
Melbourne Bros. Const. Co.
Merrill Lynch
Molly Stark Hospital
Montgomery Ward & Company
Morgan Engineering Co.
Nationwide Insurance Companies
Nickles Bakery, Inc.
North Canton Medical Foundation
Ohio Bell Telephone Company
Ohio Power Co. - Canton Div.
Peoples Drugs, Inc.
Peoples-Merchants Trust Co.
Portec, Inc. Forgings Div.
Power Systems Development, Ltd.
R & J Furniture Company
Republic Steel Corporation
Rose Lane
Royal China Co.
Sears, Roebuck & Company
Smyth Business Systems, Inc.
St. Regis Paper Company
Stark Ceramics, Inc.
Stark County
Stern & Mann Company
Sugardale Foods, Inc.
Superior's Brand Meats, Inc.
Thurin's Home Furnishings
Timken Company
Timken Mercy Hospital
Tyson Bearing Company
Union Metal Mfg. Co.
United Bank
Van Kay, Inc.

Victor R. Mayfield & Associates, Inc.
WINW Radio 1520
WNYN - Country Music 9
Waltz Photo
Warner Cable TV
Wean United, Inc.
Whitacre-Greer Fireproofing Co.
White Engines, Inc.
Wilkof-Morris Steel Corporation
Winters Industries

Types of Firms Responding

Table 1 shows the distribution of the types of businesses which responded to the questionnaire. The major responders were manufacturing, retail sales and health care institutions.

Table 1

Manufacturing	45
Sales - Retail	11
Health Care	10
Architecture & Engineering	5
Advertising	5
Bank, Savings & Loan	5
Food	5
Government, Public Service	5
Public Utility	5
Construction	3
Data Processing	3
Accountants	2
Insurance	2
Sales - Wholesale	2
Printing	1
Stock Brokers	1
Transportation	1
Motor Repair	1
	112

Number of Employees in Stark County

The majority of the firms responding employ between 100 and 999 employees, with 14 employing over 1000 persons (Table 2).

Table 2

	Number	Percent
1-99	25	25%
100-999	61	61%
1000 and over	14	14%
	100	

Anticipated Changes in Types of Employees

Several questions were asked to determine the trend in the general categories of employees that would be increased or reduced over the next five years. The results of these questions are illustrated by Table 3.

Those categories which are destined for additions are the operatives, technicians, professionals, laborers, craftsmen and office personnel. Laborers are slated for the most reduction. Of course, the disparity between the anticipated addition and reduction of laborers in the work force is due to the fact that different businesses anticipate different needs for employees.

Firms Anticipating Changes in Employees

Table 3

	Add	Reduce	Net Change
Operatives	34	7	+27
Technicians	26		+26
Professionals	25		+25
Laborers	22	19	+ 3
Craftsmen	21	5	+16
Office & Clerical	20	8	+12
Sales	14		+14
Managers & Officials	8	6	+ 2
Service Workers	6	5	+ 1

Technologies Employed

Table 4 shows that the most frequently used type of technical employee from among those technologies taught by Stark Technical College in the present business situation is that of accountants. Draftsmen and computer programmers make up the next largest group, followed by business managers and executive secretaries.

Technicians Presently Employed

Table 4

Accounting	65
Drafting & Design	44
Computer Programming	41
Business Management	32
Executive Secretarial Science	30
Electrical Engineering Technology	27
Mechanical Engineering Technology	25
Electronic Engineering Technology	20

Retail Marketing	16
Banking/Finance	13
Automotive	11
Medical Assisting	10
Medical Records	10
Civil Construction	8
Fire Science	8
Legal Secretarial Science	6
Restaurant & Food Management	6
Engineering Modeling	4
Property Management/Real Estate	4
Court/Conference Reporting	2

Changes in the Use of Technicans

One of the most significant areas of inquiry for Stark Technical College was that of the anticipated change in the relative need for various technologies in the next five years. Tables 5 and 6 show the numbers of firms planning to increase and/or reduce employees in those technical positions which are presently offered by Stark Technical College. Again, the disparity is due to different businesses anticipating increases or decreases in any given field.

The major area of increase will be computer programming, followed by accounting, electrical engineering technology, drafting, mechanical engineering technology and electronic engineering technology.

The major area of reduction in the use of technicians in Stark County industry will be in the areas of accounting, business management, drafting and design, and automotive. However, the anticipated reduction in technicians is considerably less than the anticipated increase in technicians overall.

Firms Planning to Increase Technicians

Table 5

Computer Programming	32
Accounting	24
Electrical Engineering Technology	22
Drafting & Design	21
Mechanical Engineering Technology	21
Electronic Engineering Technology	20
Business Management	19
Executive Secretarial Science	9
Retail Marketing	8
Medical Records	6
Banking/Finance	5
Medical Assisting	5
Engineering Modeling	4
Property Management/Real Estate	3
Restaurant & Food Management	3
Automotive	2
Fire Science	2
Civil Construction	1
Legal Secretarial Science	1

Firms Planning to Reduce Technicians

Table 6

Accounting	14
Business Management	9
Drafting & Design	7
Automotive	6
Banking/Finance	5
Civil Construction	5
Retail Marketing	5
Electronic Engineering Technology	4
Executive Secretarial Science	4

Restaurant & Food Management	4
Computer Programming	3
Court/Conference Reporting	3
Electrical Engineering Technology	3
Fire Science	3
Legal Secretarial Science	3
Medical Assisting	3
Medical Records	3
Property Management/Real Estate	3
Engineering Modeling	1
Mechanical Engineering Technology	1

Employers of Stark Technical College Graduates

Table 7 reveals that 61% of the persons responding to the questionnaire have employed Stark Technical College graduates in the past.

Table 7

Have Employed STC Graduates	61%
Have Not Employed STC Graduates	39%
	N=89

Employers' Satisfaction with Level of Technical Training of Graduates

Table 8 shows that the great majority of those responding who had previously employed Stark Technical graduates were satisfied with their education. This is evidenced by the fact that 96% said that they were satisfied with their employees.

Table 8

Satisfied with STC Graduates	96%
Not Satisfied with STC Graduates	4%
	N=54

Opinion of Stark Technical College Education

Table 9 shows that 83% of those responding approved of the educational program of Stark Technical College, 16% were neutral and one person disapproved of the education.

Table 9

Approve of STC Education	83%
Neutral	16%
Disapprove of STC Education	1%
	N=96

Basis for Opinion

The basis for opinion of Stark Technical College is shown in Table 10. 26% had employees who graduated from Stark Technical College, 23% had employees who attended courses or seminars at the College, 21% heard about Stark Technical College from other people; other respondents learned about it from publicity, personal attendance at seminars, children and relatives attending the College or personal graduation from the College.

Table 10

Your Employees Graduated from STC	26%
Your Employees Attended Courses/Seminars at STC	23%
You Heard about STC From Other People	21%
Publicity/Promotional Materials	15%
You Attended Courses/Seminars at STC	10%
Your Children/Relatives Attended STC	2%
You Graduated from STC	1%
Other	2%
	N=112

Technologies Not in College Curriculum but Employed in Stark County

Employers were given a list of technologies not offered at Stark Technical College and were asked to mark those they currently employ in Stark County.

As Table 11 shows, two major catagories of technicians employed in Stark County at the present time are industrial engineering technology and plant maintenance. The next major group includes purchasing, quality control, manufacturing, millwright, production/inventory control. And the third largest group includes welding fabrication advertising, tool & die design, industrial management, and electro mechanical. A total of 95 technologies are employed in Stark County and cover a very broad range of technical abilities, showing the diversity of the Stark County business and industrial scene.

Table 11

Industrial Engineering	30
Plant Maintenance	28
Purchasing	23
Quality Control	21
Manufacturing and/or Industrial	19
Millwright	19
Production/Inventory Control	19
Welding Fabrication	17
Advertising/Public Relations	16
Tool/Die Design	16
Industrial Management	15
Electro-Mechanical	14
Security	13
Nursing	12
Safety/Risk Management	12
Stationary Engineer	11

Traffic/Transportation	11
Data Center Management	10
Fluid Power	10
Electric Power	9
Jig/Fixture Design	9
Diesel	8
Energy Management	8
Insurance	8
Operating Engineer	8
Heating and Air Conditioning	7
Physical Therapy Assisting	7
Handicapped	6
Housekeeping Management	6
Practical Nursing	6
Social Services	6
Environmental Science	5
Food Industries	5
Industrial Marketing	5
Medical Secretarial	5
Numerical Control	5
Occupational Therapy Assisting	5
Pharmacy	5
Radiologic	5
Respiratory Therapy	5
Surveying	5
Art and Design	4
Broadcasting	4
Dietetic	4
Emergency Medical	4
Energy	4
Geriatric Assisting	4
Industrial Laboratory	4
Law Enforcement	4
Medical Laboratory	4
Packaging	4

Plastics/Chemical	4
Respiratory Therapy Assisting	4
Small Business Management	4
Ceramics	3
Commercial Beekeeping	3
Consumer Credit Management	3
Environmental Protection	3
Instrumentation	3
Legal Assisting	3
Mental Health Assisting	3
Recreational Therapy Assisting	3
Soil/Water Management	3
Alcoholic Rehabilitation Services	2
Biomedical Equipment	2
Building Inspection	2
Graphic Arts	2
Heat Processing	2
Histologic	2
Interior Design	2
Library/Instructional Media	2
Logistics Management	2
Municipal Waste Disposal	2
Nuclear Medicine	2
Park/Recreation/Wildlife	2
Public Administration	2
Public Health	2
Regional Planning	2
Savings and Loan Management	2
Aviation	1
Commercial Art	1
Dairy Cattle Production	1
Educational Assisting	1
Electrography	1
Highway Design	1
Industrial Graphics	1

Industrial and Off-Highway Power	1
Land Stabilization & Reclamation	1
Landscape/Turf Management	1
Livestock Production	1
Microprecision	1
Mining	1
Nursery/Greenhouse Management	1
Radiation Therapy Assisting	1
Scientific Measurement	1

Awareness of Stark Technical College Seminars and Workshops

Table 12 shows that 61% of the persons responding knew that Stark Technical College conducted seminars and workshops.

Table 12

Yes	61%
No	39%
	N=93

Workshops and Seminars Needed

The persons being questioned were asked to suggest to Stark Technical College the types of seminars and workshops which they would need in their businesses. The following list shows those which were mentioned by the respondents. If a seminar or subject was mentioned more than once, it is only listed once and the number of times it was mentioned is in parenthesis following the subject.

Active Listening Seminar
Behavioral Science
Engineering & Managment Training
Fire Prevention (3)
Food - Cleaniness
Geriactic Social & Psychological Needs

Labor Relations
Leadership & Human Relations (2)
Management (5)
    General, Developmental, Management by Objectives, Middle Management, Retail
Metallurgical offerings (3)
    General, for Physical Testing of Material, Maintenance
Nursing (2)
    New Techniques, Legal Aspects
Nurse's Aide, Advanced
Personnel - Problem Solving
Physical Therapy Assisting
Plant Maintenance - Advanced
Pre-Retirement Planning
Productivity
Quality Control
Safety (3)
Salesmanship
Supervision (6)
    General Training, On-Site, Maintenance, Leadership Skills, First Line
Technical Training for Women
Time Managment (3)

Suggestions for Improvement

The following are suggestions made by those responding for the improvement of Stark Technical College:

1. Continue to work with industry and expand available offerings.

2. Need additional trained personnel in quality assurance lab work, developmental lab work and microbiological lab work.

3. Use more professionals from area.

4. Institute Industrial Engineering type courses.

5. Personnel Technician Program - not general business, but specific personnel administration.

6. More depth is needed and possibly better teachers. Students don't have enough idea of the realities of the working office.

7. Better counseling regarding course work.

8. Better security regarding exams to avoid possibility of cheating.

DISCUSSION AND RECOMMENDATIONS

CURRICULUM

The recommendations concerning curriculum are drawn from all aspects of the study. They encompass the needs of business, the aspirations of high school students and the literature concerning demographic and opportunity trends. The recommendations cover the process of keeping the curriculum current, courses which should be investigated for possible inclusion in the curriculum and projected changes in the types of students to be included in the programs.

Process

There is a need to expand the use of volunteer committees of professionals and the Faculty Internship Program presently employed in the various fields of study to help the College to keep course offerings current. Most of the fields taught by Stark Technical College are fast-changing high technology fields. Even a brief lag between the education offered and actual practice in the field can quickly render Stark Technical College's courses obsolete.

The ongoing use of lay committees serves the additional functions of promoting the College, giving professional recognition to the volunteer professionals, and providing conduits for the placement of Stark Technical College Students.

RECOMMENDATION

- A volunteer professional committee should meet regularly for each different technology offered by Stark Technical College to help keep course offerings relevant to both students and their potential employers.
- The Faculty Internship Program should be continued and expanded in all course areas taught by the College.

People

The demographic profiles provided by various aspects of the study lead to the conclusion that Stark Technical College should plan for changes in the composition of its student market during the 1980's. The following recommendations are in response to these projected changes.

RECOMMENDATIONS

- Plan to compete with other colleges for few high school graduates.
- Plan for a continuing increase in the number of women students. Be particularly sensitive, however, to the rapid changes in the career plans and educational needs of women students as well as the rapidly changing needs of employers for women employees in traditionally male jobs.
- Plan for the educational needs of mid-career, part-time students. Due to the rapid changes in technology, this should be a growing market during the 1980's. However, ongoing planning will have to be done to meet their time schedules and changing educational requirements.

Programs

Each of the methods used in the study pointed to the need for changes in program emphasis over the next decade as is reflected in the following recommendations.

RECOMMENDATIONS

- The greatest need for technical employees will be found in wholesale and retail trade, services, manufacturing and government.

- On the basis of employer need, expand offerings for Computer Programming, Electrical Engineering, Drafting and Design, Electronic Engineering.

- On the basis of employer need, consider adding courses in Industrial Engineering, Plant Maintenance, Purchasing, Quality Control, Millwright and Production/Inventory Control.

- On the basis of statewide placement studies, consider adding courses in Inhalation Therapy, Environmental Control and Mechanical Design.

- Review courses with a low placement record to determine whether fewer students should be admitted to these programs.

PROMOTION

The Message

One of the major findings of this and other studies is the disparity between what types of education employers need their employees to have and the educational plans of students. For instance, in this study, the largest growth projections by employers were in technical fields; however, most high school seniors plan to take business courses. This disparity has come about by the rapid changes in industry and business over the past few years. Stark Technical College should become very active in assessing the needs of employers, not only for its own planning, but in order to communicate these needs to high school Guidance Counselors so that they can keep students up-to-date.

While this planning and communication is necessary, basic psychology dictates that the promotion of Stark Technical Courses should be done on the basis of what students are currently planning to study. The College presently has a number of opportunities for high school students and entering Freshmen to receive realistic information on their educational programs and job expectations after graduation. This effort should include methods of acquainting students with fields of study which are not popular at the present time, but which are described as being needed by area employers.

Another area for clarification to students is that of the advantages of a two-year degree over a traditional four-year degree. For those who are interested in working in a specific technical field, a two-year degree allows them to complete their education, enter the job market, and begin getting experience much sooner at a greatly reduced cost. In this day of greater emphasis on continuing education, they can complete other courses after entering their chosen fields.

The excellent quality of education and the past record of placement of graduates of Stark Technical College should be communicated to potential students of all ages. These facts, when presented in keeping with the "Code of Ethics for Student Recruitment Advertising", will do much to present a desirable image of the College. It might be necessary, for instance, to present the placement record of each program, together with a disclaimer to the effect that this past record does not represent a promise of the same record being achieved in the future.

RECOMMENDATIONS

- A method should be devised of actively presenting courses of study with high employment potential to the prospective students of the College.
- The advantages of a two-year college degree program should be presented to high school students as they are forming their opinions of institutions of higher education.

- The academic excellence and the past record of job placement of graduates should be communicated to potential students.

The Market

The market for presentation of information about the College should be aimed at four audiences: potential students (both traditional and non-traditional), their parents, their peers, and employers. Of course, students should be actively recruited directly. It should be remembered, however, that the majority of the high school seniors in our study said that the greatest influence on their college choice was their parents. Thus, presentations should be made to parents of potential students as well. The heavy influence of peer influence has been long recognized when dealing with young people. Therefore, there should be an effort to relate the high numbers of students which are choosing Stark Technical College in order to build an image of peer support for the student making his decision. Potential employers should be included in the recruitment program in order to stimulate job placement, as well as possible referrals by them of their employees who need particular types of training provided by the College.

RECOMMENDATION

- Recruitment promotions should be aimed at potential students, their parents, their peers, as well as potential employers.

The Media

This study has investigated ways in which the message of the College can be presented in the most effective ways. The following recommendations summarize the findings of this aspect of the study.

RECOMMENDATIONS

- Billboards should be used to acquaint the broadest number of persons with the programs and courses of the College at the lowest cost per exposure.

- Radio should be used to target the message to specific audiences as recommended above. WMMS and WOOS are the most effective media for reaching high school students.

- When using newspapers, messages to boys should be located on the Sports Page, while messages to girls should be located in the news sections.

- The use of pamphlets, brochures etc. should be limited to "point of sale" contacts, rather than as general educational materials.

- An adequate budget for media publicity should be allocated to assure the best possible art work, locations and time segments for the messages of the College.

- The faculty should continue to be involved in displays, lectures and other recruiting efforts.

STARK TECHNICAL COLLEGE
EMPLOYER QUESTIONNAIRE

Appendix A

CIRCLE THE NUMBERS THAT INDICATE YOUR ANSWERS

1. In what type of business are you engaged?

    1) Architecture and Engineering
    2) Accountants
    3) Advertising
    4) Airport
    5) Bank, Savings & Loan
    6) Construction
    7) Data Processing
    8) Food
    9) Government, Public Service
    10) Health Care
    11) Insurance
    12) Manufacturing
    13) Printing
    14) Public Utility
    15) Sales - Retail
    16) Sales - Wholesale
    17) Stock Brokers

2. How many employees do you have in Stark County?

    1) 1-10
    2) 10-49
    3) 50-99
    4) 100-249
    5) 250-499
    6) 500-999
    7) 1000-5000
    8) Over 5000

What approximate percentage of each of the following job categories do you employ in Stark County?

3. Managers and officials
    1) Less than 10%
    2) 11-25%
    3) 26-50%
    4) Over 50%

4. Professionals
    1) Less than 10%
    2) 11-25%
    3) 26-50%
    4) Over 50%

5. Technicians
    1) Less than 10%
    2) 11-25%
    3) 26-50%
    4) Over 50%

6. Sales
    1) Less than 10%
    2) 11-25%
    3) 26-50%
    4) Over 50%

7. Office and Clerical
    1) Less than 10%
    2) 11-25%
    3) 26-50%
    4) Over 50%

8. Craftsmen (skilled)
   1) Less than 10%
   2) 11-25%
   3) 26-50%
   4) Over 50%

9. Operatives (semi-skilled)
   1) Less than 10%
   2) 11-25%
   3) 26-50%
   4) Over 50%

10. Laborers (unskilled)
   1) Less than 10%
   2) 11-25%
   3) 26-50%
   4) Over 50%

11. Service Workers
   1) Less than 10%
   2) 11-25%
   3) 26-50%
   4) Over 50%

12. In which categories do you expect to ADD the MOST employees in the next five years?

   1) Managers and officials
   2) Professionals
   3) Technicians
   4) Sales
   5) Office and clerical
   6) Craftsmen (skilled)
   7) Operatives (semi-skilled)
   8) Laborers (unskilled)
   9) Service workers

13. In which categories do you expect to REDUCE employees the MOST in the next five years?

   1) Managers and officials
   2) Professionals
   3) Technicians
   4) Sales
   5) Office and Clerical
   6) Craftsmen (skilled)
   7) Operatives (semi-skilled)
   8) Laborers (unskilled)
   9) Service workers

14. Have you ever employed graduates of Stark Technical College?
   1) Yes
   2) No

15. If the answer to question 14 is "Yes", were you satisfied with their level of their technical training?

   1) Yes
   2) No
   3) We have not employed Stark Technical College graduates.

Comments: ____
(Use back page for additional comments)

> **NOTE**: For your assistance in answering the following questions, the following is a definintion of "technician" as used by Stark Technical College:
>
> "Technicians are individuals who help turn ideas and theories into actual results. They work with scientists and engineers, business and governments, to provide the important services, skills. and products necessary in today's society."

17. Circle all of the types of technicians on the list below which you employ.
1) Accounting
2) Automotive
3) Banking/Finance
4) Business Mangement
5) Civil Construction
6) Computer Programming
7) Court/Conference Reporting
8) Drafting and Design
9) Electrical Engineering
10) Electronic Engineering
11) Engineering Modeling
12) Executive Secretarial
13) Fire Science
14) Legal Secretarial
15) Mechanical Engineer
16) Medical Assisting
17) Medical Record
18) Property Management/Real Estate
19) Restaurant and Food Management
20) Retail Marketing

18. Circle the technicians which you feel you will employ less over the next five years?
1) Accounting
2) Automotive
3) Banking/Finance
4) Business Management
5) Civil Construction
6) Computer Programming
7) Court/Conference Reporting
8) Drafting and Design
9) Electrical Engineering
10) Electronic Engineering
11) Engineering Modeling
12) Executive Secretarial
13) Fire Science
14) Legal Secretarial
15) Mechanical Engineer
16) Medical Assisting
17) Medical Record
18) Property Mangement/Real Estate
19) Restaurant and Food Management
20) Retail Marketing

19. Circle the technicians which you feel you will need more of in the next five years?
1) Accounting
2) Automotive
3) Banking/Finance
4) Business Management
5) Civil Construction
6) Computer Programming
7) Court/Conference Reporting
8) Drafting and Design
9) Electrical Engineering
10) Electronic Engineering
11) Engineering Modeling
12) Executive Secretarial
13) Fire Science
14) Legal Secretarial
15) Mechanical Engineer
16) Medical Assisting
17) Medical Record
18) Property Management/Real Estate
19) Restaurant and Food Management
20) Retail Marketing

20. Following is a list of technologies that are NOT taught at Stark Technical College. Circle the numbers of the types which you employ in Stark County.

001 Advertising/Public Relations
002 Agricultural Business
003 Agricultural Communications
004 Agricultural Material Handling
005 Agricultural Machinery
006 Agricultural Production
007 Agricultural Research
008 Agronomic Business
009 Alcoholic Rehabilitation Services
010 Animal Health Assisting
011 Architectural
012 Art and Design
013 Aviation
014 Aviation Management
015 Avionics
016 Biomedical Equipment
017 Broadcasting
018 Building Inspection
019 Ceramics
020 Commerical Art
021 Commercial Beekeeping
022 Concrete
023 Consumer Credit Management
024 Corrections
025 Crop Management
026 Dairy Cattle Production

027	Data Center Management
028	Dental Assisting
029	Dental Hygiene
030	Dental Laboratory
031	Diesel
032	Dietetic
033	Early Childhood Development
034	Educational Assisting
035	Educational Services
036	Electric Power
037	Electro-Mechanical
038	Electrography
039	Emergency Medical
040	Energy
041	Energy Management
042	Environmental Protection
043	Environmental Science
044	Farm Management
045	Farm Marketing
046	Floriculture and Floral Design
047	Fluid Power
048	Food Industries
049	Geriatric Assisting
050	Graphic Arts
051	Handicapped
052	Heat Processing
053	Heating and Air Conditioning
054	Highway Design
055	Histologic
056	Housekeeping Management
057	Industrial Engineering
058	Industrial Graphics
059	Industrial Laboratory
060	Industrial Management
061	Industrial Marketing
062	Industrial and Off-Highway Power
063	Instrumentation
064	Insurance
065	Interior Design
066	Jig/Fixture Design
067	Land Stabilization & Reclamation
068	Landscape/Turf Management
069	Laser Optics
070	Law Enforcement
071	Legal Assisting
072	Library/Instructional Media
073	Livestock Production
074	Logistics Management
075	Manufacturing and/or Industrial
076	Medical Laboratory
077	Medical Secretarial
078	Mental Health Assisting
079	Microprecision
080	Millwright
081	Mining
082	Municpal Waste Disposal
083	Nuclear Medicine
084	Nuclear Power
085	Numerical Control
086	Nursery/Greenhouse Management
087	Nursing
088	Occupational Therapy Assisting
089	Operating Engineer
090	Opthalmic Dispensing
091	Optical Mechanics
092	Optometric Assisting
093	Packaging
094	Parks/Recreation/Wildlife
095	Petroleum
096	Pharmacy
097	Photography
098	Physical Therapy Assisting
099	Plant Maintenance
100	Plastics/Chemical
101	Practical Nursing
102	Product/Inventory Control
103	Public Administration
104	Public Health
105	Purchasing
106	Quality Control
107	Radiation Therapy Assisting
108	Radiologic
109	Recreational Therapy Assisting
110	Regional Planning
111	Respiratory Therapy
112	Repiratory Therapy Assisting
113	Safety/Risk Management
114	Savings and Loan Management
115	Scientific Measurement
116	Security
117	Small Business Management
118	Social Services
119	Soil/Water Management
120	Solar Energy
121	Stationary Engineer
122	Surveying
123	Technical Illustration
124	Tool/Die Design
125	Traffic/Transportation
126	Welding Fabrication

21. What is your opinion of the education offered by Stark Technical College?
   1) Strongly approve
   2) Approve
   3) Neutral
   4) Disapprove
   5) Strongly Disapprove

Comments: ____

22. What is the basis of your opinion of Stark Technical College?
   1) You graduated from Stark Technical College.
   2) Your employees graduated from the college.
   3) You attended courses or seminars at the college.
   4) Your employees attended courses or seminars at the college.
   5) Your children or relatives attended the college.
   6) Publicity or promotional materials.
   7) You heard about the college from other people.
   8) Other (specify) ______________________________

23. Are you aware that Stark Technical College will develop and conduct seminars and workshops, either at your worksite or on their campus if you request it?
   1) Yes 2) No

24. What workshops or seminars do you feel would be helpful to your employees?

____

25. What other suggestions do you have for improving Stark Technical College?

____

Additional comments

Question Number	Comments
____	____
____	____
____	____
____	____
____	____
____	____
____	____
____	____
____	____

HIGH SCHOOL QUESTIONNAIRE

WRITE THE NUMBER OF YOUR ANSWER IN THE SPACE AT THE LEFT.
DO NOT SIGN YOUR NAME

1. ____ School

    1) Alliance Senior High School
    2) Canton South Senior High School
    3) Central Catholic High School
    4) Lake Senior High School
    5) Washington Senior High School

2. ____ Sex

    1) Male
    2) Female

3. ____ Ethnic Group (optional)

    1) White
    2) Black
    3) Oriental
    4) American Indian
    5) Puerto Rican
    6) Mexican-American
    7) Other (specify) ____________

4. ____ What is your High School program?

    1) Vocational
    2) College Preparation
    3) Industrial Arts
    4) Home Economics
    5) Business
    6) General
    7) Other (specify) ____________

5. ____ What do you expect to do on a full-time basis your first year after high school?

    1) Work full time
    2) Get more education or training
    3) Military service
    4) Other (specify) ________________________

IF YOUR ANSWER TO THE ABOVE QUESTION WAS #2,
ANSWER ALL REMAINING QUESTIONS.
IF IT WAS NOT #2, SKIP TO QUESTION #12.

6. ____ If you plan to get more education or training, will you

    1) Attend a two-year community, technical, or junior college
    2) Attend a three-year college
    3) Attend a four-year college
    4) Enter Apprenticeship program to learn a trade
    5) Enter on-the-job training with a company
    6) Have not decided
    7) Other (specify) ________________________

7. ____ Which helped you most in making your decision?

1) Parents
2) Friends
3) Teachers
4) Counselors
5) Work experience
6) School activities
7) Other activities
8) Recruiters and publications
9) Other (specify) ____________________

8. ____ What is your approximate grade-point average?

1) 3.0 - 4.0 (A - B)
2) 2.0 - 3.0 (B - C)
3) 1.0 - 2.0 (C - D)
4) below 1.0 (F)

9. ____ What three reasons are most important in your choice of training or education?

No. ____
No. ____
No. ____

1) Type of education offered
2) Getting a job after graduation from college
3) Cost
4) Availability of financial aid
5) Sports
6) Other extracurricular activities
7) Social life
8) Close to home
9) Away from home
10) Quality of education
11) Other (specify) ____________________

10 ____. If you go to a 2-year college, will you apply for government financial aid?

1) Yes
2) No

11. ____ If you go to a 4-year college, will you apply for government financial aid?

1) Yes
2) No

12 ____ Which radio station do you listen to most frequently?

1) WHBC
2) WQIO
3) WNYN
4) WHLO
5) WAKR
6) WGAR
7) WMMS
8) Other (specify) ____________________

13. ____ What newspaper do you read?

1) Canton Repository
2) Akron Beacon Journal
3) Massillon Evening Independent
4) Alliance Review
5) Perry Post
6) Jackson Journal
7) Plain Tribune
8) New Philadelphia Times Reporter

14. ____ What section of the newspaper do you read most regularly?

1) Sports
2) Comics
3) Entertainment
4) News
5) Other (specify) ____________

15. ____ How much do you know about Stark Technical College?

1) Very little
2) Average amount
3) A great deal

16. ____ From who did you learn the most about Stark Technical College?

1) Friends
2) Counselors
3) College night
4) College personnel visiting school
5) Parents
6) College publications (pamphlets, catalogs)
7) Newspaper
8) Radio

17. ____ Which statement is correct?

1) Students CAN earn an associate college degree by attending Stark Technical College.
2) Students CAN earn a bachelor college degree by attending Stark Technical College.
3) Students CANNOT earn a college degree by attending Stark Technical College.

18a. ____ Following is a list of occupations.
Please write the number of your first and second choices.

18b. ____

AGRICULTURE

001 agricultural business
002 agricultural economics
003 agricultural and farm (farming and ranching)
004 agriculture, forestry and wildlife technology
005 agricultural power machinery
006 agricultural production
007 agronomy (field crops and crop management)
008 animal science (husbandry)
009 commercial beekeeping
010 dairy science
011 fish, game, and wildlife management
012 food science and technology
013 forestry
014 horticulture
015 landscaping
016 natural resources management (soil conservation)
017 nursery/greenhouse management

ARCHITECTURE

018 architecture technology
019 city, community and regional planning
020 environmental design
021 interior design

BIOLOGICAL SCIENCES

022 bacteriology
023 biology
024 biochemistry
025 biophysics
026 botany
027 ecology
028 marine biology
029 microbiology
030 physiology
031 zoology

BUSINESS

032 accounting
033 aviation management
034 banking and finance
035 bookkeeping
036 business economics
097 business management
038 court reporting
039 food marketing
040 hotel and restaurant management
041 industrial management
042 insurance
043 labor and industrial relations
044 legal assisting
045 marketing and purchasing
046 office management
047 personnel management
048 real estate
049 recreation and tourism
050 retail management
051 secretarial studies
052 retail business management
053 transportation/public utilities

COMMUNICATIONS

054 journalism
055 radio, television (broadcasting)
056 advertising

COMMUNITY SERVICE

057 fire science
058 law enforcement/corrections
059 parks and recreation management
060 public administration
061 recreational services
062 safety/risk management
063 social services
064 social work

COMPUTER, INFORMATION SCIENCES

065 computer programming
066 information systems and processing
067 systems analysis
068 data processing technology
069 computer operating
070 data systems repair

EDUCATION

071 agricultural education
072 art education
073 business education
074 college teaching
075 educational administration
076 education assisting
077 elementary education
078 English education
079 home economics education
080 industrial arts/vocational education
081 mathematics education
082 music education

082 music education
083 physical/health education
084 science education
085 secondary education, general
086 social science education
087 special education
088 speech education

ENGINEERING

089 aerospace, aeronautical and astronautical
090 agricultural engineering
091 architectural engineering
092 ceramic engineering
093 chemical engineering
094 civil engineering
095 construction engineering
096 electrical engineering
097 engineering science
098 environmental/ecological engineering
099 geological engineering
100 heat processing
101 industrial/management engineering
102 mechanical engineering
103 metallurgical/materials engineering
104 mining and mineral engineering
105 naval architecture and marine engineering
106 nuclear engineering
107 ocean engineering
108 petroleum engineering
109 textiles engineering

FINE AND APPLIED ARTS

110 acting
111 applied design (ceramics, weaving, commerical art)
112 art (painting, sculpture, drawing)
113 art history/appreciation
114 dance
115 dramatic arts (theatre arts)
116 fashion design
117 graphic design
118 interior design
119 interior decorating
120 instrumental music
121 museum work
122 music (liberal arts)
123 music (performing, composition, theory)
124 music history/appreciation
125 photography/cinematography
126 printing
127 voice

FOREIGN LANGUAGES

128 Classical languages
129 Eastern languages
130 French
131 German
132 Interpreting/translating
133 Italian
134 Latin
135 Spanish
136 Russian

HEALTH PROFESSIONS

137 animal health assisting
138 biomedical equipment technology
139 dentistry, pre-dentistry
140 dental assistant
141 dental hygiene
142 dental lab technology
143 emergency medical technology
144 environmental health technologies
145 health and safety
146 laboratory technology
147 medical records librarian
148 medicine/pre-medicine
149 medical assistant
150 medical technology
151 mental health technology
152 nursing (registered)
153 nursing (licensed practical nurse)
154 occupational therapy
155 optometric assisting
156 optometry/pre-optometry
157 pharmacy/pre-pharmacy
158 physical therapy
159 public health
160 radiology
161 respiratory therapy
162 surgical technology
163 veterinary medicine/pre-veterinary
164 X-ray technology

HOME ECONOMICS

165 clothing and textiles
166 consumer economics and home management
167 family relations/child development
168 foods and nutrition/dietetics
169 institutional management

INDUSTRIAL AND TECHNICAL

170 agricultural mechanics and technolgy
171 air-conditioning, refrigeration and heating technology

172 aeronautical and aviation technology
173 appliance repair
174 automobile body
175 automobile mechanics
176 building construction technology
177 construction
178 child care technology
179 diesel technology
180 drafting, engineering graphics
181 electro-mechanical technology
182 energy management
183 electricity and electronics
184 engineering technology-aeronautical
185 engineering technology-automotive
186 engineering technology-civil
187 engineering technology-industrial
188 engineering technology-mechanical
189 graphic arts (printing typesetting)
190 heavy equipment operating
191 industrial arts
192 industrial laboratory technology
193 instrumentation technology
194 machine work (tool and die)
195 plactics technology
196 plumbing and pipefitting
197 quality control technology
198 radio-TV repair
199 surveying
200 telecommunications electronics
201 watch and other instrument maintenance and repair
202 welding

LETTER (HUMANITIES)

203 Classics
204 comparative literature
205 creative writing
206 English, general
207 linguistics
208 literatuare, English
209 philosophy
210 religion
211 speech, debate, forensic science
212 theology

LIBRARY SCIENCE

213 library science

MATHEMATICS

214 applied mathematics
215 statistics

MILITARY SCIENCE

216 Air Force ROTC
217 Army ROTC
218 Merchant Marine
219 Navy ROTC

PHYSICAL SCIENCE

220 astronomy
221 chemistry
222 earth science
223 geology
224 meterology
225 oceanography
226 physics

SOCIAL SCIENCES

227 anthropology
228 area studies (American civilization, American studies)
229 economics
230 ethnic studies (Asian, Afro-American, Chicano, etc.)
231 geography
232 government service
233 history, general
234 history, American
235 history, ancient
236 history, European
237 industrial relations
238 international relations
239 law/pre=law
240 political science
241 psychology, general
242 psychology, child
243 psychology, experimental
244 psychology, social
245 sociology

APPENDIX B

MEDIA EVALUATION

A Public Relations Consultant for Community Services Associates conducted a media survey for this study, to help Stark Technical College plan for the most effective use of the media in its efforts to attract students. The following are the observations of the consultant.

Billboards

The most effective and inexpensive means of reaching the largest number of people of all ages and from all walks of life.

Exposure at sample locations
  Rt. 62 at Clarkins - 21,700 per day
  I-77 - 32,370 per day
  Frank Road - 5,810 per day

  Note: These figures are 83% of recorded traffic flow

Costs
  Monthly rental
    Canton - single board
      Lighted - $203
      Unlighted - $137
    Akron - No. 10 showing (7 panels) = $1,467
  Art - estimated at $500 - $600
  Printing - estimated at $700 - $800 for 12 boards

Due to Stark Technical College's service to the community, it may be possible to get area advertisers to donate billboard space occasionally for the use of the College. In addition to the obvious cost savings, this would also provide the College with the best locations in the County.

Stark Technical College's location on Interstate Route 77 and Frank Road, two highly travelled routes, indicate that billboards owned by the College would have very high exposure if erected on its property.

Newspapers

Newspapers produce the next highest exposure rate per $1,000 of advertising cost, ahead of radio, television and other printed media. The following are some representative circulation rates and costs.

Canton Repository
- Circulation - 85,000 families
- Cost - $7.28 per column inch
  - Example 3 column x 8" = $174.72

Massillon Independent
- Circulation - 19,500 families, covering Western Stark County
- Cost - $3.78 per column inch
- Note: These costs are open rate, not contract.

Other newspapers to consider
- The Catholic Exponent
- The Alliance Review
- The Times-Reporter (New Philadelphia)
- Akron Beacon Journal
- Community Newspapers, Inc.
- The Louisville Herald
- The North Canton Sun

Radio

Radio is an an excellent method of reaching specific audiences. The following are some ratings and costs at the most popular radio stations in the Stark County area. The ratings are those for the Stark County area.

Ratings
  Top
    WMMS, Cleveland
    WAKR, Akron - AM for women
    WINW, Canton - Age 18-24
    WOOS (FM 107), Canton - Age 18-45

  Medium
    WHBC, Canton - Not real young audience, heavy listenership
    WJER, Dover, New Philadelphia
    WWST, Wooster
    WQIO, Canton
    WTIG, Massillon

Sample Costs
  WHBC
    Five spots per week
      Class AA 6:00-10:00 A.M.
        30 sec. - $50.50 each
      Class B 10:00 A.M.-3:00 P.M., 6:30-11:30 P.M.
        30 sec. - $26.50 each

    104 spots per year (lowest rate)
      Class AA 30 sec. - $48.50 each
      Class B 30 sec. - $26.50 each

WQIO

Six spots per week

Grid I 30 sec. - $14.40 each
Grid II 30 sec. - $12.80 each

500 spots per year

Grid III 60 sec. - $13.00 each

COMPUTER PROGRAMS

The following pages are the COBOL programs for data analysis on the Student and Business Questionnaires. They were written at the Data Processing Center at Stark Technical College by Greg Lanka and Karen Yeary, Electronic Data Processing Specialists.

APPENDIX C

```
// CALL COBOL,F1
// RUN
       PROCESS MAP,LIST,LINK(P,R1)
       IDENTIFICATION DIVISION.
       PROGRAM-ID. SRVY01.
       AUTHOR. KAREN YEARY.
       ENVIRONMENT DIVISION.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT CARD-FILE ASSIGN TO UR-5424P-RD.
           SELECT SY-FILEP ASSIGN TO UT-3340-S-HSSURVEY.
       DATA DIVISION.
       FILE SECTION.
       FD  CARD-FILE
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS CARD-RCD.
       01  CARD-RCD.
           03  CR-SCHOOL         PIC 9.
           03  CR-SEX            PIC 9.
           03  CR-ETHNIC         PIC 9.
           03  CR-HSPROG         PIC 9.
           03  CR-FULTIME        PIC 9.
           03  CR-EDTRAIN        PIC 9.
           03  CR-DESN           PIC 9.
           03  CR-AVGE           PIC 9.
           03  CR-REDTR1         PIC 99.
           03  CR-REDTR2         PIC 99.
           03  CR-REDTR3         PIC 99.
           03  CR-FAID2YR        PIC 9.
           03  CR-FAID4YR        PIC 9.
           03  CR-RADIO          PIC 9.
           03  CR-NEWSPR         PIC 9.
           03  CR-SECTION        PIC 9.
           03  CR-KNOW           PIC 9.
           03  CR-LEARN          PIC 9.
           03  CR-STMENT         PIC 9.
           03  CR-1STOCC         PIC 999.
           03  CR-2NDOCC         PIC 999.
       FD  SY-FILEP
           LABEL RECORDS ARE STANDARD
           RECORD CONTAINS 28 CHARACTERS
           DATA RECORD IS SY.
       01  SY.
           03  SY-SCHOOL         PIC 9.
           03  SY-SEX            PIC 9.
           03  SY-ETHNIC         PIC 9.
           03  SY-HSPROG         PIC 9.
           03  SY-FULTIME        PIC 9.
           03  SY-EDTRAIN        PIC 9.
           03  SY-DESN           PIC 9.
           03  SY-AVGE           PIC 9.
           03  SY-REDTR1         PIC 99.
           03  SY-REDTR2         PIC 99.
           03  SY-REDTR3         PIC 99.
           03  SY-FAID2YR        PIC 9.
           03  SY-FAID4YR        PIC 9.
           03  SY-RADIO          PIC 9.
           03  SY-NEWSPR         PIC 9.
           03  SY-SECTION        PIC 9.
           03  SY-KNOW           PIC 9.
           03  SY-LEARN          PIC 9.
           03  SY-STMENT         PIC 9.
           03  SY-1STOCC         PIC 999.
           03  SY-2NDOCC         PIC 999.
       PROCEDURE DIVISION.
       START-PROG.
           OPEN INPUT CARD-FILE OUTPUT SY-FILEP.
       READ-CARD.
           READ CARD-FILE AT END GO TO EOJ.
           MOVE CARD-RCD TO SY.
           WRITE SY INVALID KEY DISPLAY 'INVALID WRITE' UPON CONSOLE
               GO TO EOJ.
           GO TO READ-CARD.
       EOJ.
           CLOSE CARD-FILE SY-FILEP.
           STOP RUN.
/*
```

```
// CALL COBOL,F1
// RUN
       PROCESS MAP,LIST,LINK(P,R1)
       IDENTIFICATION DIVISION.
       PROGRAM-ID. SRVY02.
       AUTHOR. KAREN YEARY.
       ENVIRONMENT DIVISION.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT SY-FILEP ASSIGN TO UT-3340-S-SORTHS.
           SELECT LIST-FILE ASSIGN TO UR-5203-3.
       DATA DIVISION.
       FILE SECTION.
       FD  SY-FILEP
           LABEL RECORDS ARE STANDARD
           RECORD CONTAINS 28 CHARACTERS
           DATA RECORD IS SY.
        01  SY.
           03  SY-SCHOOL        PIC 9.
           03  SY-SEX           PIC 9.
           03  SY-ETHNIC        PIC 9.
           03  SY-HSPROG        PIC 9.
           03  SY-FULTIME       PIC 9.
           03  SY-EDTRAIN       PIC 9.
           03  SY-DESN          PIC 9.
           03  SY-AVGE          PIC 9.
           03  SY-REDTR1        PIC 99.
           03  SY-REDTR2        PIC 99.
           03  SY-REDTR3        PIC 99.
           03  SY-FAID2YR       PIC 9.
           03  SY-FAID4YR       PIC 9.
           03  SY-RADIO         PIC 9.
           03  SY-NEWSPR        PIC 9.
           03  SY-SECTION       PIC 9.
           03  SY-KNOW          PIC 9.
           03  SY-LEARN         PIC 9.
           03  SY-STMENT        PIC 9.
           03  SY-1STOCC        PIC 999.
           03  SY-2NDOCC        PIC 999.
       FD  LIST-FILE
           LABEL RECORDS ARE OMITTED
           LINAGE IS 66 LINES WITH FOOTING AT 56
           DATA RECORD IS LIST.
       01  LIST                 PIC X(132).
       WORKING-STORAGE SECTION.
       01  HEADERS.
           03  H-1.
               05  FIL          PIC X(5)   VALUE 'DATE'.
               05  MO-OUT       PIC XX.
               05  FIL          PIC X   VALUE '-'.
               05  DA-OUT       PIC XX.
               05  FIL          PIC X   VALUE '-'.
               05  YR-OUT       PIC X(42).
               05  FIL          PIC X(72)   VALUE
                   'HIGH SCHOOL QUESTIONNAIRE'.
               05  FIL          PIC X(5)   VALUE 'PAGE'.
               05  PAGE-OUT     PIC Z9.
           03  H-2.
               05  FIL          PIC X(47)   VALUE SPACES.
               05  FIL          PIC X(39)   VALUE
           'ADMINISTERED BY STARK TECHNICAL COLLEGE'.
 03  H-3.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(10)   VALUE '1)  SCHOOL'.
 03  H-4.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(7)   VALUE '2)  SEX'.
 03  H-5.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(16)   VALUE '3)  ETHNIC GROUP'.
 03  H-6.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(23)   VALUE
         '4)  HIGH SCHOOL PROGRAM'.
 03  H-7.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(26)   VALUE
         '5)  FULL-TIME EXPECTATIONS'.
 03  H-8.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(29)  VALUE
         '6)  FUTURE EDUCATION/TRAINING'.
 03  H-9.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(26)   VALUE
         '7)  MOST IMPORTANT DECIDOR'.
 03  H-10.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(23)   VALUE
         '8)  GRADE-POTNT AVERAGE'.
 03  H-11.
     05  FIL          PIC X(10)   VALUE SPACES.
     05  FIL          PIC X(44)   VALUE
         '9)  REASONS FOR CHOICE OF TRAINING/EDUCATION'.
 03  H-12.
     05  FIL          PIC X(9)   VALUE SPACES.
     05  FIL          PIC X(36)   VALUE
         '10)  FINANCIAL AIDE - 2-YEAR COLLEGE'.
 03  H-13.
     05  FIL          PIC X(9)   VALUE SPACES.
     05  FIL          PIC X(36)   VALUE
         '11)  FINANCIAL AIDE - 4-YEAR COLLEGE'.
 03  H-14.
     05  FIL          PIC X(9)   VALUE SPACES.
     05  FIL          PIC X(27)   VALUE
         '12)  FAVORITE RADIO STATION'.
 03  H-15.
     05  FIL          PIC X(9)   VALUE SPACES.
     05  FIL          PIC X(23)   VALUE
         '13)  FAVORITE NEWSPAPER'.
 03  H-16.
     05  FIL          PIC X(9)   VALUE SPACES.
     05  FIL          PIC X(31)   VALUE
         '14)  FAVORITE NEWSPAPER SECTION'.
 03  H-17.
     05  FIL          PIC X(9)   VALUE SPACES.
     05  FIL          PIC X(21)   VALUE
         '15)  KNOWLEDGE OF STC'.
 03  H-18.
     05  FIL          PIC X(9)   VALUE SPACES.
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          05  FIL           PIC X(40)   VALUE
              '16)  RECEIVED INFORMATION ABOUT STC FROM'.
      03  H-19.
          05  FIL           PIC X(9)   VALUE SPACES.
          05  FIL           PIC X(22)   VALUE
              '17)  CORRECT STATEMENT'.
      03  H-20.
          05  FIL           PIC X(9)   VALUE SPACES.
          05  FIL           PIC X(40)   VALUE
              '18)  FIRST AND SECOND OCCUPATION CHOICES'.
      03  H-21.
          05  FIL           PIC X(36)   VALUE SPACES.
          05  FIL           PIC X(9)   VALUE '1ST   2ND'.
      03  H-22.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(11)   VALUE 'AGRICULTURE'.
      03  H-23.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(12)  VALUE 'ARCHITECTURE'.
      03  H-24.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(19)   VALUE 'BIOLOGICAL SCIENCES'.
      03  H-25.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(8)    VALUE 'BUSINESS'.
      03  H-26.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(14)   VALUE 'COMMUNICATIONS'.
      03  H-27.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(17)   VALUE 'COMMUNITY SERVICE'.
      03  H-28.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(30)   VALUE
              'COMPUTER, INFORMATION SCIENCES'.
      03  H-29.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(9)   VALUE 'EDUCATION'.
      03  H-30.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(11)   VALUE 'ENGINEERING'.
      03  H-31.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(21)   VALUE
              'FINE AND APPLIED ARTS'.
      03  H-32.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(17)   VALUE 'FOREIGN LANGUAGES'.
      03  H-33.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(18)   VALUE 'HEALTH PROFESSIONS'.
      03  H-34.
          05  FIL           PIC X(48)  VALUE SPACES.
          05  FIL           PIC X(14)   VALUE 'HOME ECONOMICS'.
      03  H-35.
          05  FIL           PIC X(48)   VALUE SPACES.
          05  FIL           PIC X(24)   VALUE
              'INDUSTRIAL AND TECHNICAL'.
      03  H-36.
          05  FIL           PIC X(48)   VALUE SPACES.
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            05  FIL           PIC X(20)   VALUE 'LETTERS (HUMANITES)'.
        03  H-37.
            05  FIL           PIC X(48)   VALUE SPACES.
            05  FIL           PIC X(15)   VALUE 'LIBRARY SCIENCE'.
        03  H-38.
            05  FIL           PIC X(48)  VALUE SPACES.
            05  FIL           PIC X(11)   VALUE 'MATHEMATICS'.
        03  H-39.
            05  FIL           PIC X(48)   VALUE SPACES.
            05  FIL           PIC X(16)   VALUE 'MILITARY SCIENCE'.
        03  H-40.
            05  FIL           PIC X(48)   VALUE SPACES.
            05  FIL           PIC X(16)   VALUE 'PHYSICAL SCIENCE'.
        03  H-41.
            05  FIL           PIC X(48)   VALUE SPACES.
            05  FIL           PIC X(15)   VALUE 'SOCIAL SCIENCES'.
    01  SYS-DATE.
        03  YEAR              PIC 99.
        03  MONTH             PIC 99.
        03  DAY               PIC 99.
    01  DETAIL-1.
        03  FIL               PIC X(36)   VALUE SPACES.
        03  SUM-OUT           PIC  ZZZ9.
        03  FIL               PIC XX   VALUE SPACES.
        03  DESC-OUT          PIC X(35).
    01  DETAIL-2.
        03  FIL               PIC X(36)   VALUE SPACES.
        03  OCC1-OUT          PIC ZZZ9.
        03  FIL               PIC XX   VALUE SPACES.
        03  OCC2-OUT          PIC ZZZ9.
        03  FIL               PIC XX   VALUE SPACES.
        03  OCDESC-OUT        PIC X(37).
    01  SUB                   PIC 999   VALUE 0.
    01  PAGE-CTR              PIC 99   VALUE 0.
    01  TABLE-A.
        03  FIL               PIC X(41)   VALUE '010000ALLIANCE'.
        03  FIL               PIC X(41)   VALUE '020000CANTON SOUTH'.
        03  FIL               PIC X(41)   VALUE
            '030000CENTRAL CATHOLIC'.
        03  FIL               PIC X(41)   VALUE '040000LAKE'.
        03  FIL               PIC X(41)   VALUE '050000WASHINGTON'.
        03  FIL               PIC X(41)   VALUE '010000MALE'.
        03  FIL               PIC X(41)   VALUE '020000FEMALE'.
        03  FIL               PIC X(41)   VALUE '010000WHITE'.
        03  FIL               PIC X(41)   VALUE '020000BLACK'.
        03  FIL               PIC X(41)   VALUE '030000ORIENTAL'.
        03  FIL               PIC X(41)   VALUE
            '040000AMERICAN-INDIAN'.
        03  FIL               PIC X(41)   VALUE '050000PUERTO RICAN'.
        03  FIL               PIC X(41)   VALUE
            '060000MEXICAN-AMERICAN'.
        03  FIL               PIC X(41)   VALUE '070000OTHER'.
        03  FIL               PIC X(41)   VALUE '010000VOCATIONAL'.
        03  FIL               PIC X(41)   VALUE
            '020000COLLEGE PREPARATION'.
        03  FIL               PIC X(41)   VALUE
            '030000INDUSTRIAL-ARTS'.
        03  FIL               PIC X(41)   VALUE '040000HOME ECONOMICS'.
        03  FIL               PIC X(41)   VALUE '050000BUSINESS'.
        03  FIL               PIC X(41)   VALUE '060000GENERAL'.
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           03  FIL                 PIC X(41)   VALUE '070000OTHER'.
           03  FIL                 PIC X(41)   VALUE '010000WORK'.
           03  FIL                 PIC X(41)   VALUE
               '020000MORE EDUCATION/TRAINING'.
           03  FIL                 PIC X(41)   VALUE
               '030000MILITARY SERVICE'.
           03  FIL                 PIC X(41)   VALUE '040000OTHER'.
           03  FIL                 PIC X(41)   VALUE
               '010000ATTEND 2-YEAR COLLEGE'.
           03  FIL                 PIC X(41)   VALUE
               '020000ATTEND 3-YEAR COLLEGE'.
           03  FIL                 PIC X(41)   VALUE
               '030000ATTEND 4-YEAR COLLEGE'.
           03  FIL                 PIC X(41)   VALUE
               '040000ENTER APPRENTICESHIP PROGRAM'.
           03  FIL                 PIC X(41)   VALUE
               '050000ENTER ON-THE-JOB TRAINING PROGRAM'.
           03  FIL                 PIC X(41)   VALUE
               '060000HAVE NOT DECIDED'.
           03  FIL                 PIC X(41)   VALUE '070000OTHER'.
           03  FIL                 PIC X(41)   VALUE '010000PARENTS'.
           03  FIL                 PIC X(41)   VALUE '020000FRIENDS'.
           03  FIL                 PIC X(41)   VALUE '030000TEACHERS'.
           03  FIL                 PIC X(41)   VALUE '040000COUNSELORS'.
           03  FIL                 PIC X(41)   VALUE
               '050000WORK EXPERIENCE'.
           03  FIL                 PIC X(41)   VALUE
               '060000SCHOOL ACTIVITIES'.
           03  FIL                 PIC X(41)   VALUE
               '070000OTHER ACTIVITIES'.
           03  FIL                 PIC X(41)   VALUE
               '080000RECRUITERS AND PUBLICATIONS'.
           03  FIL                 PIC X(41)   VALUE '090000OTHER'.
           03  FIL                 PIC X(41)   VALUE
               '0100003.0 - 4.0 (A-B)'.
           03  FIL                 PIC X(41)   VALUE
               '0200002.0 - 3.0 (B-C)'.
           03  FIL                 PIC X(41)   VALUE
               '0300001.0 - 2.0 (C-D)'.
           03  FIL                 PIC X(41)   VALUE '040000BELOW 1.0 (F)'.
           03  FIL                 PIC X(41)   VALUE
               '010000TYPE OF EDUCATION OFFERED'.
           03  FIL                 PIC X(41)   VALUE
               '020000JOB PLACEMENT AFTER GRADUATION'.
           03  FIL                 PIC X(41)   VALUE '030000COST'.
           03  FIL                 PIC X(41)   VALUE
               '040000AVAILABILITY OF FINANCIAL AIDE'.
           03  FIL                 PIC X(41)   VALUE '050000SPORTS'.
           03  FIL                 PIC X(41)   VALUE
               '060000EXTRACURRICULAR ACTIVITIES'.
           03  FIL                 PIC X(41)   VALUE '070000SOCIAL LIFE'.
           03  FIL                 PIC X(41)   VALUE '080000CLOSE TO HOME'.
           03  FIL                 PIC X(41)   VALUE '090000AWAY FROM HOME'.
           03  FIL                 PIC X(41)   VALUE
               '100000QUALITY OF EDUCATION'.
           03  FIL                 PIC X(41)   VALUE '110000OTHER'.
           03  FIL                 PIC X(41)   VALUE '010000YES'.
           03  FIL                 PIC X(41)   VALUE '020000NO'.
           03  FIL                 PIC X(41)   VALUE '010000YES'.
           03  FIL                 PIC X(41)   VALUE '020000NO'.
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    03  FIL             PIC X(41)   VALUE '010000WHBC'.
    03  FIL             PIC X(41)   VALUE '020000WQIO'.
    03  FIL             PIC X(41)   VALUE '030000WNYN'.
    03  FIL             PIC X(41)   VALUE '040000WHLO'.
    03  FIL             PIC X(41)   VALUE '050000WAKR'.
    03  FIL             PIC X(41)   VALUE '060000WGAR'.
    03  FIL             PIC X(41)   VALUE '070000WMMS'.
    03  FIL             PIC X(41)   VALUE '080000OTHER'.
    03  FIL             PIC X(41)   VALUE
        '010000CANTON REPOSITORY'.
    03  FIL             PIC X(41)   VALUE
        '020000AKRON BEACON JOURNAL'.
    03  FIL             PIC X(41)   VALUE
        '030000MASSILLON EVENING INDEPENDENT'.
    03  FIL             PIC X(41)   VALUE
        '040000ALLIANCE REVIEW'.
    03  FIL             PIC X(41)   VALUE '050000PERRY POST'.
    03  FIL             PIC X(41)   VALUE
        '060000JACKSON JOURNAL'.
    03  FIL             PIC X(41)   VALUE '070000PLAIN TRIBUNE'.
    03  FIL             PIC X(41)   VALUE
        '080000NEW PHILADELPHIA TIMES REPORTER'.
    03  FIL             PIC X(41)   VALUE '010000SPORTS'.
    03  FIL             PIC X(41)   VALUE '020000COMICS'.
    03  FIL             PIC X(41)   VALUE '030000ENTERTAINMENT'.
    03  FIL             PIC X(41)   VALUE '040000NEWS'.
    03  FIL             PIC X(41)   VALUE '050000OTHER'.
    03  FIL             PIC X(41)   VALUE '010000VERY LITTLE'.
    03  FIL             PIC X(41)   VALUE
        '020000AVERAGE AMOUNT'.
    03  FIL             PIC X(41)   VALUE '030000A GREAT DEAL'.
    03  FIL             PIC X(41)   VALUE '010000FRIENDS'.
    03  FIL             PIC X(41)   VALUE '020000COUNSELORS'.
    03  FIL             PIC X(41)   VALUE '030000COLLEGE NIGHT'.
    03  FIL             PIC X(41)   VALUE
        '040000COLLEGE PERSONNEL VISITING SCHOOL'.
    03  FIL             PIC X(41)   VALUE '050000PARENTS'.
    03  FIL             PIC X(41)   VALUE
        '060000COLLEGE PUBLICATIONS'.
    03  FIL             PIC X(41)   VALUE '070000NEWSPAPER'.
    03  FIL             PIC X(41)   VALUE '080000RADIO'.
    03  FIL             PIC X(41)   VALUE
        '010000CAN EARN AN ASSOCIATE DEGREE AT STC'.
    03  FIL             PIC X(41)   VALUE
        '020000CAN EARN A BACHELOR DEGREE AT STC'.
    03  FIL             PIC X(41)   VALUE
        '030000CANNOT EARN A DEGREE AT STC'.
01  A-TABLE REDEFINES TABLE-A.
    03  ITEM OCCURS 95 TIMES.
        05  ANSWER      PIC 99.
        05  SUM         PIC 9999.
        05  DESC        PIC X(35).
01  TABLE-B.
    03  FIL             PIC X(48)   VALUE
        '0010000000AGRICULTURAL BUSINESS'.
    03  FIL             PIC X(48)   VALUE
        '0020000000AGRICULTURAL ECONOMICS'.
    03  FIL             PIC X(48)   VALUE
        '0030000000AGRICULTURAL/FARM MANAGEMENT'.
    03  FIL             PIC X(48)   VALUE
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     '0040000000FORESTRY/WILDLIFE TECHNOLOGY'.
 03  FIL                 PIC X(48)   VALUE
     '0050000000AGRICULTURAL POWER MACHINERY'.
 03  FIL                 PIC X(48)   VALUE
     '0060000000AGRICULTURAL PRODUCTION'.
 03  FIL                 PIC X(48)   VALUE '0070000000AGRONOMY'.
 03  FIL                 PIC X(48)   VALUE
     '0080000000ANIMAL SCIENCE'.
 03  FIL                 PIC X(48)   VALUE
     '0090000000COMMERCIAL BEEKEEPING'.
 03  FIL                 PIC X(48)   VALUE
     '0100000000DAIRY SCIENCE'.
 03  FIL                 PIC X(48)   VALUE
     '0110000000FISH/GAME/WILDLIFE MANAGEMENT'.
 03  FIL                 PIC X(48)   VALUE
     '0120000000FOOD SCIENCE AND TECHNOLOGY'.
 03  FIL                 PIC X(48)   VALUE
     '0130000000FORESTRY'.
 03  FIL                 PIC X(48)   VALUE
     '0140000000HORTICULTURE'.
 03  FIL                 PIC X(48)   VALUE
     '0150000000LANDSCAPING'.
 03  FIL                 PIC X(48)   VALUE
     '0160000000NATURAL RESOURCES MANAGEMENT'.
 03  FIL                 PIC X(48)   VALUE
     '0170000000NURSERY/GREENHOUSE MANAGEMENT'.
 03  FIL                 PIC X(48)   VALUE
     '0180000000ARCHITECTURE TECHNOLOGY'.
 03  FIL                 PIC X(48)   VALUE
     '0190000000CITY/COMMUNITY/REGIONAL PLANNING'.
 03  FIL                 PIC X(48)   VALUE
     '0200000000ENVIRONMENT DESIGN'.
 03  FIL                 PIC X(48)   VALUE
     '0210000000INTERIOR DESIGN'.
 03  FIL                 PIC X(48)   VALUE
     '0220000000BACTERIOLOGY'.
 03  FIL                 PIC X(48)   VALUE '0230000000BIOLOGY'.
 03  FIL                 PIC X(48)   VALUE
     '0240000000BIOCHEMISTRY'.
 03  FIL                 PIC X(48)   VALUE
     '0250000000BIOPHYSICS'.
 03  FIL                 PIC X(48)   VALUE '0260000000BOTANY'.
 03  FIL                 PIC X(48)   VALUE '0270000000ECOLOGY'.
 03  FIL                 PIC X(48)   VALUE
     '0280000000MARINE BIOLOGY'.
 03  FIL                 PIC X(48)   VALUE
     '0290000000MICROBIOLOGY'.
 03  FIL                 PIC X(48)   VALUE
     '0300000000PHYSIOLOGY'.
 03  FIL                 PIC X(48)   VALUE '0310000000ZOOLOGY'.
 03  FIL                 PIC X(48)   VALUE
     '0320000000ACCOUNTING'.
 03  FIL                 PIC X(48)   VALUE
     '0330000000AVIATION MANAGEMENT'.
 03  FIL                 PIC X(48)   VALUE
     '0340000000BANKING AND FINANCE'.
 03  FIL                 PIC X(48)   VALUE
     '0350000000BOOKEEPING'.
 03  FIL                 PIC X(48)   VALUE
     '0360000000BUSINESS ECONOMICS'.
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03  FIL                PIC X(48)   VALUE
    '0370000000BUSINESS MANAGEMENT'.
03  FIL                PIC X(48)   VALUE
    '0380000000COURT REPORTING'.
03  FIL                PIC X(48)   VALUE
    '0390000000FOOD MARKETING'.
03  FIL                PIC X(48)   VALUE
    '0400000000HOTEL AND RESTAURANT MANAGEMENT'.
03  FIL                PIC X(48)   VALUE
    '0410000000INDUSTRIAL MANAGEMENT'.
03  FIL                PIC X(48)   VALUE
    '0420000000INSURANCE'.
03  FIL                PIC X(48)   VALUE
    '0430000000LABOR AND INDUSTRIAL RELATIONS'.
03  FIL                PIC X(48)   VALUE
    '0440000000LEGAL ASSISTING'.
03  FIL                PIC X(48)   VALUE
    '0450000000MARKETING AND PURCHASING'.
03  FIL                PIC X(48)   VALUE
    '0460000000OFFICE MANAGEMENT'.
03  FIL                PIC X(48)   VALUE
    '0470000000PERSONNEL MANAGEMENT'.
03  FIL                PIC X(48)   VALUE
    '0480000000REAL ESTATE'.
03  FIL                PIC X(48)   VALUE
    '0490000000RECREATION AND TOURISM'.
03  FIL                PIC X(48)   VALUE
    '0500000000RETAIL MANAGEMENT'.
03  FIL                PIC X(48)   VALUE
    '0510000000SECRETARIAL STUDIES'.
03  FIL                PIC X(48)   VALUE
    '0520000000SMALL BUSINESS MANGAGMENT'.
03  FIL                PIC X(48)   VALUE
    '0530000000TRANSPORTATION/PUBLIC UTILITIES'.
03  FIL                PIC X(48)   VALUE
    '0540000000JOURNALISM'.
03  FIL                PIC X(48)   VALUE
    '0550000000RADIO/TELEVISION'.
03  FIL                PIC X(48)   VALUE
    '0560000000ADVERTISING'.
03  FIL                PIC X(48)   VALUE
    '0570000000FIRE SCIENCE'.
03  FIL                PIC X(48)   VALUE
    '0580000000LAW ENFORCEMENT/CORRECTIONS'.
03  FIL                PIC X(48)   VALUE
    '0590000000PARKS AND RECREATION MANAGEMENT'.
03  FIL                PIC X(48)   VALUE
    '0600000000PUBLIC ADMINISTRATION'.
03  FIL                PIC X(48)   VALUE
    '0610000000RECREATIONAL SERVICES'.
03  FIL                PIC X(48)   VALUE
    '0620000000SAFETY/RISK MANAGEMENT'.
03  FIL                PIC X(48)   VALUE
    '0630000000SOCIAL SERVICES'.
03  FIL                PIC X(48)   VALUE
    '0640000000SOCIAL WORK'.
03  FIL                PIC X(48)   VALUE
    '0650000000COMPUTER PROGRAMMING'.
03  FIL                PIC X(48)   VALUE
    '0660000000INFORMATION SYSTEMS AND PROCESSING'.
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 03  FIL              PIC X(48)   VALUE
     '0670000000SYSTEMS ANALYSIS'.
 03  FIL              PIC X(48)   VALUE
     '0680000000DATA PROCESSING TECHNOLOGY'.
 03  FIL              PIC X(48)   VALUE
     '0690000000COMPUTER OPERATING'.
 03  FIL              PIC X(48)   VALUE
     '0700000000DATA SYSTEMS REPAIR'.
 03  FIL              PIC X(48)   VALUE
     '0710000000AGRICULTURAL EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0720000000ART EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0730000000BUSINESS EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0740000000COLLEGE TEACHING'.
 03  FIL              PIC X(48)   VALUE
     '0750000000EDUCATIONAL ADMINISTRATION'.
 03  FIL              PIC X(48)   VALUE
     '0760000000EDUCATIONAL ASSISTING'.
 03  FIL              PIC X(48)   VALUE
     '0770000000ELEMENTARY EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0780000000ENGLISH EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0790000000HOME ECONOMICS EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0800000000INDUSTRIAL ARTS/VOCATIONAL EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0810000000MATHEMATICS EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0820000000MUSIC EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0830000000PHYSICAL/HEALTH EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0840000000SCIENCE EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0850000000SECONDARY EDUCATION, GENERAL'.
 03  FIL              PIC X(48)   VALUE
     '0860000000SOCIAL SCIENCE EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0870000000SPECIAL EDUCATION'.
 03  FIL              PIC X(48)   VALUE
     '0880000000SPEECH EDUCATIAON'.
 03  FIL              PIC X(48)   VALUE
     '0890000000AEROSPACE/AERONAUTICAL/ASTRONAUTICAL'.
 03  FIL              PIC X(48)   VALUE
     '0900000000AGRICULTURAL ENGINEERING'.
 03  FIL              PIC X(48)   VALUE
     '0910000000ARCHITECTURAL ENGINEERING'.
 03  FIL              PIC X(48)   VALUE
     '0920000000CERAMIC ENGINEERING'.
 03  FIL              PIC X(48)   VALUE
     '0930000000CHEMICAL ENGINEERING'.
 03  FIL              PIC X(48)   VALUE
     '0940000000CIVIL ENGINEERING'.
 03  FIL              PIC X(48)   VALUE
     '0950000000CONSTRUCTION ENGINEERING'.
 03  FIL              PIC X(48)   VALUE
     '0960000000ELECTRICAL ENGINEERING'.
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03  FIL                PIC X(48)   VALUE
    '09700000000ENGINEERING SCIENCE'.
03  FIL                PIC X(48)   VALUE
    '09800000000ENVIRONMENTAL/ECOLOGICAL ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '09900000000GEOLOGICAL ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10000000000HEAT PROCESSING'.
03  FIL                PIC X(48)   VALUE
    '10100000000INDUSTRIAL/MANAGEMENT ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10200000000MECHANICAL ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10300000000METALLURGICAL/MATERIALS ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10400000000MINING AND MINERAL ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10500000000NAVAL ARCHITECTURE/MARINE ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10600000000NUCLEAR ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10700000000OCEAN ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10800000000PETROLEUM ENGINEERING'.
03  FIL                PIC X(48)   VALUE
    '10900000000TEXTILES ENGINEERING'.
03  FIL                PIC X(48)   VALUE '11000000000ACTING'.
03  FIL                PIC X(48)   VALUE
    '11100000000APPLIED DESIGN'.
03  FIL                PIC X(48)   VALUE '11200000000ART'.
03  FIL                PIC X(48)   VALUE
    '11300000000ART HISTORY/APPRECIATION'.
03  FIL                PIC X(48)   VALUE '11400000000DANCE'.
03  FIL                PIC X(48)   VALUE
    '11500000000DRAMATIC ARTS'.
03  FIL                PIC X(48)   VALUE
    '11600000000FASHION DESIGN'.
03  FIL                PIC X(48)   VALUE
    '11700000000GRAPHIC DESIGN'.
03  FIL                PIC X(48)   VALUE
    '11800000000INTERIOR DESIGN'.
03  FIL                PIC X(48)   VALUE
    '11900000000INTERIOR DECORATING'.
03  FIL                PIC X(48)   VALUE
    '12000000000INSTRUMENTAL MUSIC'.
03  FIL                PIC X(48)   VALUE
    '12100000000MUSEUM WORK'.
03  FIL                PIC X(48)   VALUE
    '12200000000MUSIC (LIBERAL ARTS)'.
03  FIL                PIC X(48)   VALUE
    '12300000000MUSIC (PERFORMING/COMPOSITION/THEORY)'.
03  FIL                PIC X(48)   VALUE
    '12400000000MUSIC HISTORY/APPRECIATION'.
03  FIL                PIC X(48)   VALUE
    '12500000000PHOTOGRAPHY/CINEMATOGRAPHY'.
03  FIL                PIC X(48)   VALUE
    '12600000000PRINTING'.
03  FIL                PIC X(48)   VALUE '12700000000VOICE'.
03  FIL                PIC X(48)   VALUE
    '12800000000CLASSICAL LANGUAGES'.
```

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03  FIL                 PIC X(48)   VALUE
    '1290000000EASTERN LANGUAGES'.
03  FIL                 PIC X(48)   VALUE '1300000000FRENCH'.
03  FIL                 PIC X(48)   VALUE '1310000000GERMAN'.
03  FIL                 PIC X(48)   VALUE
    '1320000000INTERPRETING/TRANSLATING'.
03  FIL                 PIC X(48)   VALUE '1330000000ITALIAN'.
03  FIL                 PIC X(48)   VALUE '1340000000LATIN'.
03  FIL                 PIC X(48)   VALUE '1350000000SPANISH'.
03  FIL                 PIC X(48)   VALUE '1360000000RUSSIAN'.
03  FIL                 PIC X(48)   VALUE
    '1370000000ANIMAL HEALTH ASSISTING'.
03  FIL                 PIC X(48)   VALUE
    '1380000000BIOMEDICAL EQUIPMENT TECHNOLOGY'.
03  FIL                 PIC X(48)   VALUE
    '1390000000DENTISTRY/PRE-DENTRISTRY'.
03  FIL                 PIC X(48)   VALUE
    '1400000000DENTAL ASSISTANT'.
03  FIL                 PIC X(48)   VALUE
    '1410000000DENTAL HYGIENE'.
03  FIL                 PIC X(48)   VALUE
    '1420000000DENTAL LAB TECHNOLOGY'.
03  FIL                 PIC X(48)   VALUE
    '1430000000EMERGENCY MEDICAL TECHNOLOGY'.
03  FIL                 PIC X(48)   VALUE
    '1440000000ENVIRONMENTAL HEALTH TECHNOLOGIES'.
03  FIL                 PIC X(48)   VALUE
    '1450000000HEALTH AND SAFETY'.
03  FIL                 PIC X(48)   VALUE
    '1460000000LABORATORY TECHNOLOGY'.
03  FIL                 PIC X(48)   VALUE
    '1470000000MEDICAL RECORDS LIBRARIAN'.
03  FIL                 PIC X(48)   VALUE
    '1480000000MEDICINE/PRE-MEDCINE'.
03  FIL                 PIC X(48)   VALUE
    '1490000000MEDICAL ASSISTANT'.
03  FIL                 PIC X(48)   VALUE
    '1500000000MEDICAL TECHNOLOGY'.
03  FIL                 PIC X(48)   VALUE
    '1510000000MENTAL HEALTH TECHNOLOGY'.
03  FIL                 PIC X(48)   VALUE
    '1520000000NURSING (REGISTERED)'.
03  FIL                 PIC X(48)   VALUE
    '1530000000NURSING (LICENSED PRACTICAL NURSE)'.
03  FIL                 PIC X(48)   VALUE
    '1540000000OCCUPATIONAL THERAPY'.
03  FIL                 PIC X(48)   VALUE
    '1550000000OPTOMETRIC ASSISTING'.
03  FIL                 PIC X(48)   VALUE
    '1560000000OPTOMETRY/PRE-OPTOMETRY'.
03  FIL                 PIC X(48)   VALUE
    '1570000000PHARMACY/PRE-PHARMACY'.
03  FIL                 PIC X(48)   VALUE
    '1580000000PHYSICAL THERAPY'.
03  FIL                 PIC X(48)   VALUE
    '1590000000PUBLIC HEALTH'.
03  FIL                 PIC X(48)   VALUE
    '1600000000RADIOLOGY'.
03  FIL                 PIC X(48)   VALUE
    '1610000000RESPIRATORY THERAPY'.
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03  FIL               PIC X(48)    VALUE
    '1620000000SURGICAL TECHNOLOGY'.
03  FIL               PIC X(48)    VALUE
    '1630000000VETERINARY MEDICINE/PRE-VETERINARY'.
03  FIL               PIC X(48)    VALUE
    '1640000000XRAY TECHNOLOGY'.
03  FIL               PIC X(48)    VALUE
    '1650000000CLOTHING AND TEXTILES'.
03  FIL               PIC X(48)    VALUE
    '1660000000COMSUMER ECONOMICS/HOME MANAGEMENT'.
03  FIL               PIC X(48)    VALUE
    '1670000000FAMILY RELATIONS/CHILD DEVELOPMENT'.
03  FIL               PIC X(48)    VALUE
    '1680000000FOODS AND NUTRITION/DIETETICS'.
03  FIL               PIC X(48)    VALUE
    '1690000000INSTITUTIONAL MANAGEMENT'.
03  FIL               PIC X(48)    VALUE
    '1700000000AGRICULTURAL MECHANICS AND TECHNOLOGY'.
03  FIL               PIC X(48)    VALUE
    '1710000000AIRCONDITIONING/REFRIGERATION/HEATING'.
03  FIL               PIC X(48)    VALUE
    '1720000000AERONAUTICAL/AVIATION TECHNOLOGY'.
03  FIL               PIC X(48)    VALUE
    '1730000000APPLIANCE REPAIR'.
03  FIL               PIC X(48)    VALUE
    '1740000000AUTOMOBILE BODY REPAIR'.
03  FIL               PIC X(48)    VALUE
    '1750000000AUTOMOBILE MECHANICS'.
03  FIL               PIC X(48)    VALUE
    '1760000000BUILDING CONSTRUCTION TECHNOLOGY'.
03  FIL               PIC X(48)    VALUE
    '1770000000CONSTRUCTION'.
03  FIL               PIC X(48)    VALUE
    '1780000000CHILD CARE TECHNOLOGY'.
03  FIL               PIC X(48)    VALUE
    '1790000000DIESEL TECHNOLOGY'.
03  FIL               PIC X(48)    VALUE
    '1800000000DRAFTING/ENGINEERING GRAPHICS'.
03  FIL               PIC X(48)    VALUE
    '1810000000ELECTRO-MECHANICAL TECHNOLOGY'.
03  FIL               PIC X(48)    VALUE
    '1820000000ENERGY MANAGEMENT'.
03  FIL               PIC X(48)    VALUE
    '1830000000ELECTRICITY AND ELECTRONICS'.
03  FIL               PIC X(48)    VALUE
    '1840000000ENGINEERING TECHNOLOGY-AERONAUTICAL'.
03  FIL               PIC X(48)    VALUE
    '1850000000ENGINEERING TECHNOLOGY-AUTOMOTIVE'.
03  FIL               PIC X(48)    VALUE
    '1860000000ENGINEERING TECHNOLOGY-CIVIL'.
03  FIL               PIC X(48)    VALUE
    '1870000000ENGINEERING TECHNOLOGY-INDUSTRIAL'.
03  FIL               PIC X(48)    VALUE
    '1880000000ENGINEERING TECHNOLOGY-MECHANICAL'.
03  FIL               PIC X(48)    VALUE
    '1890000000GRAPHIC ARTS'.
03  FIL               PIC X(48)    VALUE
    '1900000000HEAVY EQUIPMENT OPERATING'.
03  FIL               PIC X(48)    VALUE
    '1910000000INDUSTRIAL ARTS'.
```

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03  FIL                 PIC X(48)    VALUE
    '19200000000INDUSTRIAL LABORATORY TECHNOLOGY'.
03  FIL                 PIC X(48)    VALUE
    '19300000000INSTRUMENTATION TECHNOLOGY'.
03  FIL                 PIC X(48)    VALUE
    '19400000000MACHINE WORK'.
03  FIL                 PIC X(48)    VALUE
    '19500000000PLASTICS TECHNOLOGY'.
03  FIL                 PIC X(48)    VALUE
    '19600000000PLUMBING AND PIPEFITTING'.
03  FIL                 PIC X(48)    VALUE
    '19700000000QUALITY CONTROL TECHNOLOGY'.
03  FIL                 PIC X(48)    VALUE
    '19800000000RADIO-TV REPAIR'.
03  FIL                 PIC X(48)    VALUE
    '19900000000SURVEYING'.
03  FIL                 PIC X(48)    VALUE
    '20000000000TELECOMMUNICATIONS ELECTRONICS'.
03  FIL                 PIC X(48)    VALUE
    '20100000000WATCH/INSTRUMENT MAINTENANCE/REPAIR'.
03  FIL                 PIC X(48)    VALUE '20200000000WELDING'.
03  FIL                 PIC X(48)    VALUE
    '20300000000CLASSICS'.
03  FIL                 PIC X(48)    VALUE
    '20400000000COMPARATIVE LITERATURE'.
03  FIL                 PIC X(48)    VALUE
    '20500000000CREATIVE WRITING'.
03  FIL                 PIC X(48)    VALUE
    '20600000000ENGLISH, GENERAL'.
03  FIL                 PIC X(48)    VALUE
    '20700000000LINGUISTICS'.
03  FIL                 PIC X(48)    VALUE
    '20800000000LITERATURE, ENGLISH'.
03  FIL                 PIC X(48)    VALUE
    '20900000000PHILOSOPHY'.
03  FIL                 PIC X(48)    VALUE
    '21000000000RELIGION'.
03  FIL                 PIC X(48)    VALUE
    '21100000000SPEECH/DEBATE/FORENSIC SCIENCE'.
03  FIL                 PIC X(48)    VALUE
    '21200000000THEOLOGY'.
03  FIL                 PIC X(48)    VALUE
    '21300000000LIBRARY SCIENCE'.
03  FIL                 PIC X(48)    VALUE
    '21400000000APPLIED MATHEMATICS'.
03  FIL                 PIC X(48)    VALUE
    '21500000000STATISTICS'.
03  FIL                 PIC X(48)    VALUE
    '21600000000AIR FORCE ROTC'.
03  FIL                 PIC X(48)    VALUE
    '21700000000ARMY ROTC'.
03  FIL                 PIC X(48)    VALUE
    '21800000000MERCHANT MARINE'.
03  FIL                 PIC X(48)    VALUE
    '21900000000NAVY ROTC'.
03  FIL                 PIC X(48)    VALUE
    '22000000000ASTRONOMY'.
03  FIL                 PIC X(48)    VALUE
    '22100000000CHEMISTRY'.
03  FIL                 PIC X(48)    VALUE
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        '22200000000EARTH SCIENCE'.
    03  FIL             PIC X(48)   VALUE '22300000000GEOLOGY'.
    03  FIL             PIC X(48)   VALUE
        '22400000000METEOROLOGY'.
    03  FIL             PIC X(48)   VALUE
        '22500000000OCEANOGRAPHY'.
    03  FIL             PIC X(48)   VALUE '22600000000PHYSICS'.
    03  FIL             PIC X(48)   VALUE
        '22700000000ANTHROPOLOGY'.
    03  FIL             PIC X(48)   VALUE
        '22800000000AREA STUDIES'.
    03  FIL             PIC X(48)   VALUE
        '22900000000ECONOMICS'.
    03  FIL             PIC X(48)   VALUE
        '23000000000ETHNIC STUDIES'.
    03  FIL             PIC X(48)   VALUE
        '23100000000GEOGRAPHY'.
    03  FIL             PIC X(48)   VALUE
        '23200000000GOVERNMENT SERVICE'.
    03  FIL             PIC X(48)   VALUE
        '23300000000HISTORY, GENERAL'.
    03  FIL             PIC X(48)   VALUE
        '23400000000HISTORY, AMERICAN'.
    03  FIL             PIC X(48)   VALUE
        '23500000000HISTORY, ANCIENT'.
    03  FIL             PIC X(48)   VALUE
        '23600000000HISTORY, EUROPEAN'.
    03  FIL             PIC X(48)   VALUE
        '23700000000INDUSTIRAL RELATIONS'.
    03  FIL             PIC X(48)   VALUE
        '23800000000INTERNATIONAL RELATIONS'.
    03  FIL             PIC X(48)   VALUE
        '23900000000LAW/PRE-LAW'.
    03  FIL             PIC X(48)   VALUE
        '24000000000POLITICAL SCIENCE'.
    03  FIL             PIC X(48)   VALUE
        '24100000000PSYCHOLOGY, GENERAL'.
    03  FIL             PIC X(48)   VALUE
        '24200000000PSYCHOLOGY, CHILD'.
    03  FIL             PIC X(48)   VALUE
        '24300000000PSYCHOLOGY, EXPERIMENTAL'.
    03  FIL             PIC X(48)   VALUE
        '24400000000PSYCHOLOGY, SOCIAL'.
    03  FIL             PIC X(48)   VALUE
        '24500000000SOCIOLOGY'.
01  B-TABLE REDEFINES TABLE-B.
    03  ITEM OCCURS 245 TIMES.
        05  OCCNO       PIC 999.
        05  1OCSUM      PIC 9(4).
        05  2OCSUM      PIC 9(4).
        05  OCDESC      PIC X(37).
PROCEDURE DIVISION.
STSRT-PROG.
    OPEN INPUT SY-FILEP OUTPUT LIST-FILE.
    PERFORM HEADINGS.
READ-SY.
    READ SY-FILEP AT END GO TO PRINT-DETAIL.
LOOKUP-SCHOOL.
    ADD 1 TO SUB.
    IF SY-SCHOOL = ANSWER (SUB)
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```
                ADD 1 TO SUM (SUB)
                MOVE 5 TO SUB
                GO TO LOOKUP-SEX.
            IF SUB = 5 GO TO LOOKUP-SEX.
            GO TO LOOKUP-SCHOOL.
        LOOKUP-SEX.
            ADD 1 TO SUB.
            IF SY-SEX = ANSWER (SUB)
                ADD 1 TO SUM (SUB)
                MOVE 7 TO SUB
                GO TO LOOKUP-ETHNIC.
            IF SUB = 7 GO TO LOOKUP-ETHNIC.
            GO TO LOOKUP-SEX.
        LOOKUP-ETHNIC.
            ADD 1 TO SUB.
            IF SY-ETHNIC = ANSWER (SUB)
                ADD 1 TO SUM (SUB)
                MOVE 14 TO SUB
                GO TO LOOKUP-HSPROG.
            IF SUB = 14 GO TO LOOKUP-HSPROG.
            GO TO LOOKUP-ETHNIC.
        LOOKUP-HSPROG.
            ADD 1 TO SUB.
            IF SY-HSPROG = ANSWER (SUB)
                ADD 1 TO SUM (SUB)
                MOVE 21 TO SUB
                GO TO LOOKUP-FULTIME.
            IF SUB = 21 GO TO LOOKUP-FULTIME.
            GO TO LOOKUP-HSPROG.
        LOOKUP-FULTIME.
            ADD 1 TO SUB.
            IF SY-FULTIME = ANSWER (SUB)
                ADD 1 TO SUM (SUB)
                MOVE 25 TO SUB
                GO TO LOOKUP-EDTRAIN.
            IF SUB = 25 GO TO LOOKUP-EDTRAIN.
            GO TO LOOKUP-FULTIME.
        LOOKUP-EDTRAIN.
            ADD 1 TO SUB.
            IF SY-EDTRAIN = ANSWER (SUB)
                ADD 1 TO SUM (SUB)
                MOVE 32 TO SUB
                GO TO LOOKUP-DESN.
            IF SUB = 32 GO TO LOOKUP-DESN.
            GO TO LOOKUP-EDTRAIN.
        LOOKUP-DESN.
            ADD 1 TO SUB.
            IF SY-DESN = ANSWER (SUB)
                ADD 1 TO SUM (SUB)
                MOVE 41 TO SUB
                GO TO LOOKUP-AVGE.
            IF SUB = 41 GO TO LOOKUP-AVGE.
            GO TO LOOKUP-DESN.
        LOOKUP-AVGE.
            ADD 1 TO SUB.
            IF SY-AVGE = ANSWER (SUB)
                ADD 1 TO SUM (SUB)
                MOVE 45 TO SUB
                GO TO LOOKUP-REDTR.
            IF SUB = 45 GO TO LOOKUP-REDTR.
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    GO TO LOOKUP-AVGE.
LOOKUP-REDTR.
    ADD 1 TO SUB.
    IF SY-REDTR1 = ANSWER (SUB) OR SY-REDTR2 = ANSWER (SUB) OR
        SY-REDTR3 = ANSWER (SUB) ADD 1 TO SUM (SUB).
    IF SUB = 56 GO TO LOOKUP-FAID2YR.
    GO TO LOOKUP-REDTR.
LOOKUP-FAID2YR.
    ADD 1 TO SUB.
    IF SY-FAID2YR = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 58 TO SUB
        GO TO LOOKUP-FAID4YR.
    IF SUB = 58 GO TO LOOKUP-FAID4YR.
    GO TO LOOKUP-FAID2YR.
LOOKUP-FAID4YR.
    ADD 1 TO SUB.
    IF SY-FAID4YR = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 60 TO SUB
        GO TO LOOKUP-RADIO.
    IF SUB = 60 GO TO LOOKUP-RADIO.
    GO TO LOOKUP-FAID4YR.
LOOKUP-RADIO.
    ADD 1 TO SUB.
    IF SY-RADIO = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 68 TO SUB
        GO TO LOOKUP-NEWSPR.
    IF SUB = 68 GO TO LOOKUP-NEWSPR.
    GO TO LOOKUP-RADIO.
LOOKUP-NEWSPR.
    ADD 1 TO SUB.
    IF SY-NEWSPR = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 76 TO SUB
        GO TO LOOKUP-SECTION.
    IF SUB = 76 GO TO LOOKUP-SECTION.
    GO TO LOOKUP-NEWSPR.
LOOKUP-SECTION.
    ADD 1 TO SUB.
    IF SY-SECTION = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 81 TO SUB
        GO TO LOOKUP-KNOW.
    IF SUB = 81 GO TO LOOKUP-KNOW.
    GO TO LOOKUP-SECTION.
LOOKUP-KNOW.
    ADD 1 TO SUB.
    IF SY-KNOW = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 84 TO SUB
        GO TO LOOKUP-LEARN.
    IF SUB = 84 GO TO LOOKUP-LEARN.
    GO TO LOOKUP-KNOW.
LOOKUP-LEARN.
    ADD 1 TO SUB.
    IF SY-LEARN = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 92 TO SUB
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            GO TO LOOKUP-STMENT.
        IF SUB = 92 GO TO LOOKUP-STMENT.
        GO TO LOOKUP-LEARN.
    LOOKUP-STMENT.
        ADD 1 TO SUB.
        IF SY-STMENT = ANSWER (SUB)
            ADD 1 TO SUM (SUB)
            MOVE 0 TO SUB
            GO TO LOOKUP-1STOCC.
        IF SUB = 95 MOVE 0 TO SUB
            GO TO LOOKUP-1STOCC.
        GO TO LOOKUP-STMENT.
    LOOKUP-1STOCC.
        ADD 1 TO SUB.
        IF SY-1STOCC = OCCNO (SUB)
            ADD 1 TO 1OCSUM (SUB)
            MOVE 0 TO SUB
            GO TO LOOKUP-2NDOCC.
        IF SUB = 245 MOVE 0 TO SUB
            GO TO LOOKUP-2NDOCC.
        GO TO LOOKUP-1STOCC.
    LOOKUP-2NDOCC.
        ADD 1 TO SUB.
        IF SY-2NDOCC = OCCNO (SUB)
            ADD 1 TO 2OCSUM (SUB)
            MOVE 0 TO SUB
            GO TO READ-SY.
        IF SUB = 245 MOVE 0 TO SUB
            GO TO READ-SY.
        GO TO LOOKUP-2NDOCC.
    HEADINGS.
        MOVE SPACES TO LIST.
        WRITE LIST AFTER ADVANCING PAGE.
        ADD 1 TO PAGE-CTR.
        MOVE PAGE-CTR TO PAGE-OUT.
        ACCEPT SYS-DATE FROM DATE.
        MOVE MONTH TO MO-OUT.
        MOVE DAY TO DA-OUT.
        MOVE YEAR TO YR-OUT.
        WRITE LIST FROM H-1 AFTER ADVANCING 1.
        WRITE LIST FROM H-2 AFTER ADVANCING 1.
    PRINT-DETAIL.
        ADD 1 TO SUB.
        IF SUB = 1 WRITE LIST FROM H-3 AFTER ADVANCING 2.
        IF SUB = 6 WRITE LIST FROM H-4 AFTER ADVANCING 2.
        IF SUB = 8 WRITE LIST FROM H-5 AFTER ADVANCING 2.
        IF SUB = 15 WRITE LIST FROM H-6 AFTER ADVANCING 2.
        IF SUB = 22 WRITE LIST FROM H-7 AFTER ADVANCING 2.
        IF SUB = 26 WRITE LIST FROM H-8 AFTER ADVANCING 2.
        IF SUB = 33 WRITE LIST FROM H-9 AFTER ADVANCING 2.
        IF SUB = 42 PERFORM HEADINGS
            WRITE LIST FROM H-10 AFTER ADVANCING 2.
        IF SUB = 46 WRITE LIST FROM H-11 AFTER ADVANCING 2.
        IF SUB = 57 WRITE LIST FROM H-12 AFTER ADVANCING 2.
        IF SUB = 59 WRITE LIST FROM H-13 AFTER ADVANCING 2.
        IF SUB = 61 WRITE LIST FROM H-14 AFTER ADVANCING 2.
        IF SUB = 69 WRITE LIST FROM H-15 AFTER ADVANCING 2.
        IF SUB = 77 WRITE LIST FROM H-16 AFTER ADVANCING 2.
        IF SUB = 82 PERFORM HEADINGS
            WRITE LIST FROM H-17 AFTER ADVANCING 2 .
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           IF SUB = 85 WRITE LIST FROM H-18 AFTER ADVANCING 2.
           IF SUB = 93 WRITE LIST FROM H-19 AFTER ADVANCING 2.
           IF SUB = 96 WRITE LIST FROM H-20 AFTER ADVANCING 2
               WRITE LIST FROM H-21 AFTER ADVANCING 1
               MOVE 0 TO SUB
               GO TO WRITE-OCC.
           MOVE SUM (SUB) TO SUM-OUT.
           MOVE DESC (SUB) TO DESC-OUT.
           WRITE LIST FROM DETAIL-1 AFTER ADVANCING 1.
           GO TO PRINT-DETAIL.
       WRITE-OCC.
           ADD 1 TO SUB.
           IF SUB = 1 WRITE LIST FROM H-22 AFTER ADVANCING 2.
           IF SUB = 18 PERFORM HEADINGS
               WRITE LIST FROM H-20 AFTER ADVANCING 2
               WRITE LIST FROM H-21 AFTER ADVANCING 1
               WRITE LIST FROM H-23 AFTER ADVANCING 2.
           IF SUB = 22 WRITE LIST FROM H-24 AFTER ADVANCING 2.
           IF SUB = 32 WRITE LIST FROM H-25 AFTER ADVANCING 2.
           IF SUB = 54 WRITE LIST FROM H-26 AFTER ADVANCING 2.
           IF SUB = 57 PERFORM HEADINGS
               WRITE LIST FROM H-20 AFTER ADVANCING 2
               WRITE LIST FROM H-21 AFTER ADVANCING 1
               WRITE LIST FROM H-27 AFTER ADVANCING 2.
           IF SUB = 65 WRITE LIST FROM H-28 AFTER ADVANCING 2.
           IF SUB = 71 WRITE LIST FROM H-29 AFTER ADVANCING 2.
           IF SUB = 89 PERFORM HEADINGS
               WRITE LIST FROM H-20 AFTER ADVANCING 2
               WRITE LIST FROM H-21 AFTER ADVANCING 1
               WRITE LIST FROM H-30 AFTER ADVANCING 2.
           IF SUB = 110 WRITE LIST FROM H-31 AFTER ADVANCING 2.
           IF SUB = 128 WRITE LIST FROM H-32 AFTER ADVANCING 2.
           IF SUB = 137 PERFORM HEADINGS
               WRITE LIST FROM H-20 AFTER ADVANCING 2
               WRITE LIST FROM H-21 AFTER ADVANCING 1
               WRITE LIST FROM H-33 AFTER ADVANCING 2.
           IF SUB = 165 WRITE LIST FROM H-34 AFTER ADVANCING 2.
           IF SUB = 170 PERFORM HEADINGS
               WRITE LIST FROM H-20 AFTER ADVANCING 2
               WRITE LIST FROM H-21 AFTER ADVANCING 1
               WRITE LIST FROM H-35 AFTER ADVANCING 2.
           IF SUB = 203 WRITE LIST FROM H-36 AFTER ADVANCING 2.
           IF SUB = 213 WRITE LIST FROM H-37 AFTER ADVANCING 2.
           IF SUB = 214 WRITE LIST FROM H-38 AFTER ADVANCING 2.
           IF SUB = 216 PERFORM HEADINGS
               WRITE LIST FROM H-20 AFTER ADVANCING 2
               WRITE LIST FROM H-21 AFTER ADVANCING 1
               WRITE LIST FROM H-39 AFTER ADVANCING 2.
           IF SUB = 220 WRITE LIST FROM H-40 AFTER ADVANCING 2.
           IF SUB = 227 WRITE LIST FROM H-41 AFTER ADVANCING 2.
           IF SUB = 246 GO TO EOJ.
           MOVE 1OCSUM (SUB) TO OCC1-OUT.
           MOVE 2OCSUM (SUB) TO OCC2-OUT.
           MOVE OCDESC (SUB) TO OCDESC-OUT.
           WRITE LIST FROM DETAIL-2 AFTER ADVANCING 1.
           GO TO WRITE-OCC.
       EOJ.
           CLOSE SY-FILEP LIST-FILE.
           STOP RUN.
/*
```

```
// CALL COBOL,F1
// RUN
     PROCESS MAP,LIST,LINK(P,R1)
     IDENTIFICATION DIVISION.
     PROGRAM-ID. EMPSY1.
     AUTHOR. KAREN YEARY.
     ENVIRONMENT DIVISION.
     INPUT-OUTPUT SECTION.
     FILE-CONTROL.
        SELECT CARD-FILE ASSIGN TO UR-5424P-RD.
        SELECT EM-FILE ASSIGN TO UT-3340-S-EMPSVY.
     DATA DIVISION.
     FILE SECTION.
     FD  CARD-FILE
        LABEL RECORDS ARE OMITTED
        DATA RECORD IS CARD-RCD.
     01  CARD-RCD.
        03  CR-BUS1            PIC 99.
        03  CR-BUS2            PIC 99.
        03  CR-BUS3            PIC 99.
        03  CR-BUS4            PIC 99.
        03  CR-BUS5            PIC 99.
        03  CR-NOEMP           PIC 9.
        03  CR-MANOFF          PIC 9.
        03  CR-PROF            PIC 9.
        03  CR-TECH            PIC 9.
        03  CR-SALES           PIC 9.
        03  CR-OFFCLER         PIC 9.
        03  CR-CRAFT           PIC 9.
        03  CR-OPER            PIC 9.
        03  CR-LABOR           PIC 9.
        03  CR-SERV            PIC 9.
        03  CR-ADDEMP1         PIC 9.
        03  CR-ADDEMP2         PIC 9.
        03  CR-ADDEMP3         PIC 9.
        03  CR-ADDEMP4         PIC 9.
        03  CR-ADDEMP5         PIC 9.
        03  CR-ADDEMP6         PIC 9.
        03  CR-ADDEMP7         PIC 9.
        03  CR-ADDEMP8         PIC 9.
        03  CR-ADDEMP9         PIC 9.
        03  CR-REDEMP1         PIC 9.
        03  CR-REDEMP2         PIC 9.
        03  CR-REDEMP3         PIC 9.
        03  CR-REDEMP4         PIC 9.
        03  CR-REDEMP5         PIC 9.
        03  CR-REDEMP6         PIC 9.
        03  CR-REDEMP7         PIC 9.
        03  CR-REDEMP8         PIC 9.
        03  CR-REDEMP9         PIC 9.
        03  CR-GRAD            PIC 9.
        03  CR-SATISFY         PIC 9.
        03  CR-TEMP1           PIC 99.
        03  CR-TEMP2           PIC 99.
        03  CR-TEMP3           PIC 99.
        03  CR-TEMP4           PIC 99.
        03  CR-TEMP5           PIC 99.
        03  CR-TRED1           PIC 99.
        03  CR-TRED2           PIC 99.
        03  CR-TRED3           PIC 99.
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          03  CR-TRED4            PIC 99.
          03  CR-TRED5            PIC 99.
          03  CR-TADD1            PIC 99.
          03  CR-TADD2            PIC 99.
          03  CR-TADD3            PIC 99.
          03  CR-TADD4            PIC 99.
          03  CR-TADD5            PIC 99.
          03  CR-TYPEMP1          PIC 999.
          03  CR-TYPEMP2          PIC 999.
          03  CR-TYPEMP3          PIC 999.
          03  CR-TYPEMP4          PIC 999.
          03  CR-TYPEMP5          PIC 999.
          03  CR-TYPEMP6          PIC 999.
          03  CR-TYPEMP7          PIC 999.
          03  CR-OPED             PIC 9.
          03  CR-BASIS            PIC 9.
          03  CR-SEMRS            PIC 9.
      FD  EM-FILE
          LABEL RECORDS ARE STANDARD
          RECORD CONTAINS 94 CHARACTERS
          DATA RECORD IS EM.
      01  EM.
          03  EM-BUS1             PIC 99.
          03  EM-BUS2             PIC 99.
          03  EM-BUS3             PIC 99.
          03  EM-BUS4             PIC 99.
          03  EM-BUS5             PIC 99.
          03  EM-NOEMP            PIC 9.
          03  EM-MANOFF           PIC 9.
          03  EM-PROF             PIC 9.
          03  EM-TECH             PIC 9.
          03  EM-SALES            PIC 9.
          03  EM-OFFCLER          PIC 9.
          03  EM-CRAFT            PIC 9.
          03  EM-OPER             PIC 9.
          03  EM-LABOR            PIC 9.
          03  EM-SERV             PIC 9.
          03  EM-ADDEMP1          PIC 9.
          03  EM-ADDEMP2          PIC 9.
          03  EM-ADDEMP3          PIC 9.
          03  EM-ADDEMP4          PIC 9.
          03  EM-ADDEMP5          PIC 9.
          03  EM-ADDEMP6          PIC 9.
          03  EM-ADDEMP7          PIC 9.
          03  EM-ADDEMP8          PIC 9.
          03  EM-ADDEMP9          PIC 9.
          03  EM-REDEMP1          PIC 9.
          03  EM-REDEMP2          PIC 9.
          03  EM-REDEMP3          PIC 9.
          03  EM-REDEMP4          PIC 9.
          03  EM-REDEMP5          PIC 9.
          03  EM-REDEMP6          PIC 9.
          03  EM-REDEMP7          PIC 9.
          03  EM-REDEMP8          PIC 9.
          03  EM-REDEMP9          PIC 9.
          03  EM-GRAD             PIC 9.
          03  EM-SATISFY          PIC 9.
          03  EM-TEMP1            PIC 99.
          03  EM-TEMP2            PIC 99.
          03  EM-TEMP3            PIC 99.
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           03  EM-TEMP4           PIC 99.
           03  EM-TEMP5           PIC 99.
           03  EM-TRED1           PIC 99.
           03  EM-TRED2           PIC 99.
           03  EM-TRED3           PIC 99.
           03  EM-TRED4           PIC 99.
           03  EM-TRED5           PIC 99.
           03  EM-TADD1           PIC 99.
           03  EM-TADD2           PIC 99.
           03  EM-TADD3           PIC 99.
           03  EM-TADD4           PIC 99.
           03  EM-TADD5           PIC 99.
           03  EM-TYPEMP1         PIC 999.
           03  EM-TYPEMP2         PIC 999.
           03  EM-TYPEMP3         PIC 999.
           03  EM-TYPEMP4         PIC 999.
           03  EM-TYPEMP5         PIC 999.
           03  EM-TYPEMP6         PIC 999.
           03  EM-TYPEMP7         PIC 999.
           03  EM-OPED            PIC 9.
           03  EM-BASIS           PIC 9.
           03  EM-SEMRS           PIC 9.
       PROCEDURE DIVISION.
       START-PROG.
           OPEN INPUT CARD-FILE OUTPUT EM-FILE.
       READ-CARD.
           READ CARD-FILE AT END GO TO EOJ.
           MOVE CARD-RCD TO EM.
           WRITE EM INVALID KEY DISPLAY 'INVALID WRITE' UPON CONSOLE
               GO TO EOJ.
           GO TO READ-CARD.
       EOJ.
           CLOSE CARD-FILE EM-FILE.
           STOP RUN.
  /*
```

```
// CALL COBOL,F1
// RUN
       PROCESS MAP,LIST,LINK(P,R1)
       IDENTIFICATION DIVISION.
       PROGRAM-ID. EMPSY2.
       AUTHOR. KAREN YEARY.
       ENVIRONMENT DIVISION.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT EM-FILE ASSIGN TO UT-3340-S-EMPSVY.
           SELECT LIST-FILE ASSIGN TO UR-5203-3.
       DATA DIVISION.
       FILE SECTION.
       FD  EM-FILE
           LABEL RECORDS ARE STANDARD
           RECORD CONTAINS 94 CHARACTERS
           DATA RECORD IS EM.
       01  EM.
           03  EM-BUS1         PIC 99.
           03  EM-BUS2         PIC 99.
           03  EM-BUS3         PIC 99.
           03  EM-BUS4         PIC 99.
           03  EM-BUS5         PIC 99.
           03  EM-NOEMP        PIC 9.
           03  EM-MANOFF       PIC 9.
           03  EM-PROF         PIC 9.
           03  EM-TECH         PIC 9.
           03  EM-SALES        PIC 9.
           03  EM-OFFCLER      PIC 9.
           03  EM-CRAFT        PIC 9.
           03  EM-OPER         PIC 9.
           03  EM-LABOR        PIC 9.
           03  EM-SERV         PIC 9.
           03  EM-ADDEMP1      PIC 9.
           03  EM-ADDEMP2      PIC 9.
           03  EM-ADDEMP3      PIC 9.
           03  EM-ADDEMP4      PIC 9.
           03  EM-ADDEMP5      PIC 9.
           03  EM-ADDEMP6      PIC 9.
           03  EM-ADDEMP7      PIC 9.
           03  EM-ADDEMP8      PIC 9.
           03  EM-ADDEMP9      PIC 9.
           03  EM-REDEMP1      PIC 9.
           03  EM-REDEMP2      PIC 9.
           03  EM-REDEMP3      PIC 9.
           03  EM-REDEMP4      PIC 9.
           03  EM-REDEMP5      PIC 9.
           03  EM-REDEMP6      PIC 9.
           03  EM-REDEMP7      PIC 9.
           03  EM-REDEMP8      PIC 9.
           03  EM-REDEMP9      PIC 9.
           03  EM-GRAD         PIC 9.
           03  EM-SATISFY      PIC 9.
           03  EM-TEMP1        PIC 99.
           03  EM-TEMP2        PIC 99.
           03  EM-TEMP3        PIC 99.
           03  EM-TEMP4        PIC 99.
           03  EM-TEMP5        PIC 99.
           03  EM-TRED1        PIC 99.
           03  EM-TRED2        PIC 99.
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    03  EM-TRED3        PIC 99.
    03  EM-TRED4        PIC 99.
    03  EM-TRED5        PIC 99.
    03  EM-TADD1        PIC 99.
    03  EM-TADD2        PIC 99.
    03  EM-TADD3        PIC 99.
    03  EM-TADD4        PIC 99.
    03  EM-TADD5        PIC 99.
    03  EM-TYPEMP1      PIC 999.
    03  EM-TYPEMP2      PIC 999.
    03  EM-TYPEMP3      PIC 999.
    03  EM-TYPEMP4      PIC 999.
    03  EM-TYPEMP5      PIC 999.
    03  EM-TYPEMP6      PIC 999.
    03  EM-TYPEMP7      PIC 999.
    03  EM-OPED         PIC 9.
    03  EM-BASIS        PIC 9.
    03  EM-SEMRS        PIC 9.
FD  LIST-FILE
    LABEL RECORDS ARE OMITTED
    LINAGE IS 66 WITH FOOTING AT 56
    DATA RECORD IS LIST.
01  LIST                PIC X(132).
WORKING-STORAGE SECTION.
01  HEADERS.
    03  H-1.
        05  FIL         PIC X(5)   VALUE 'DATE'.
        05  MO-OUT      PIC XX.
        05  FIL         PIC X   VALUE '-'.
        05  DA-OUT      PIC XX.
        05  FIL         PIC X   VALUE '-'.
        05  YR-OUT      PIC X(44).
        05  FIL         PIC X(61)   VALUE
            'EMPLOYER QUESTIONNAIRE'.
        05  FIL         PIC X(5)   VALUE 'PAGE'.
        05  PAGE-OUT    PIC Z9.
    03  H-2.
        05  FIL         PIC X(46)   VALUE SPACES.
        05  FIL         PIC X(39)   VALUE
            'ADMINISTERED BY STARK TECHNICAL COLLEGE'.
    03  H-3.
        05  FIL         PIC X(10)   VALUE SPACES.
        05  FIL         PIC X(20)   VALUE '1)  TYPE OF BUSINESS'.
    03  H-4.
        05  FIL         PIC X(10)   VALUE SPACES.
        05  FIL         PIC X(39)   VALUE
            '2)  NUMBER OF EMPLOYEES IN STARK COUNTY'.
    03  H-5.
        05  FIL         PIC X(10)   VALUE SPACES.
        05  FIL         PIC X(26)   VALUE
            '3)  MANAGERS AND OFFICALS'.
    03  H-6.
        05  FIL         PIC X(10)   VALUE SPACES.
        05  FIL         PIC X(17)   VALUE '4)  PROFESSIONALS'.
    03  H-7.
        05  FIL         PIC X(10)   VALUE SPACES.
        05  FIL         PIC X(15)   VALUE '5)  TECHNICANS'.
    03  H-8.
        05  FIL         PIC X(10)   VALUE SPACES.
        05  FIL         PIC X(9)    VALUE '6)  SALES'.
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03  H-9.
    05  FIL            PIC X(10)   VALUE SPACES.
    05  FIL            PIC X(24)   VALUE
        '7)  OFFICE AND CLERICAL'.
03  H-10.
    05  FIL            PIC X(10)   VALUE SPACES.
    05  FIL            PIC X(23)   VALUE
        '8)  CRAFTSMEN (SKILLED)'.
03  H-11.
    05  FIL            PIC X(10)   VALUE SPACES.
    05  FIL            PIC X(28)   VALUE
        '9)  OPERATORS (SEMI-SKILLED)'.
03  H-12.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(25)   VALUE
        '10)  LABORERS (UNSKILLED)'.
03  H-13.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(20)   VALUE '11)  SERVICE WORKERS'.
03  H-14.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(40)   VALUE
        '12)  CATEGORIES FOR ADDITIONAL EMPLOYEES'.
03  H-15.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(42)   VALUE
        '13)  CATEGORIES FOR REDUCTION IN EMPLOYEES'.
03  H-16.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(32)   VALUE
        '14)  EVER EMPLOYED STC GRADUATES'.
03  H-17.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(47)   VALUE
        '15)  SATISFIED WITH LEVEL OF TECHNICAL TRAINING'.
03  H-18.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(35)   VALUE
        '17)  TECHNICIANS PRESENTLY EMPLOYED'.
03  H-19.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(30)   VALUE
        '18)  TECHNICIANS TO BE REDUCED'.
03  H-20.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(32)   VALUE
        '19)  TECHNICIANS TO BE INCREASED'.
03  H-21.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(42)   VALUE
        '20)  TECHNOLOGIES EMPLOYED IN STARK COUNTY'.
03  H-22.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(29)   VALUE
        '21)  OPINION OF STC EDUCATION'.
03  H-23.
    05  FIL            PIC X(9)   VALUE SPACES.
    05  FIL            PIC X(22)   VALUE
        '22)  BASIS FOR OPINION'.
03  H-24.
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                05  FIL           PIC X(9)   VALUE SPACES.
                05  FIL           PIC X(44)    VALUE
                   '23)  AWARENESS OF STC SEMINARS AND WORKSHOPS'.
            03  H-25.
                05  FIL           PIC X(42)    VALUE SPACES.
                05  FIL           PIC X(10)    VALUE 'PERCENTAGE'.
        01  DETAIL.
            03  FIL               PIC X(36)    VALUE SPACES.
            03  SUM-OUT           PIC ZZZ9.
            03  FIL               PIC XX    VALUE SPACES.
            03  DESC-OUT          PIC X(53).
        01  SYS-DATE.
            03  YEAR              PIC XX.
            03  MONTH             PIC XX.
            03  DAY               PIC XX.
        01  SUB                   PIC 999 VALUE 0.
        01  CTR                   PIC 999   VALUE 0.
        01  PAGE-CTR              PIC 99   VALUE 0.
        01  TABLE-A.
            03  FIL               PIC X(59)    VALUE
                '010000ARCHITECTURE AND ENGINEERING'.
            03  FIL               PIC X(59)    VALUE '020000ACCOUNTANTS'.
            03  FIL               PIC X(59)    VALUE '030000ADVERTISING'.
            03  FIL               PIC X(59)    VALUE '040000AIRPORT'.
            03  FIL               PIC X(59)    VALUE
                '050000BANK, SAVINGS AND LOAN'.
            03  FIL               PIC X(59)    VALUE '060000CONSTRUCTION'.
            03  FIL               PIC X(59)    VALUE
                '070000DATA PROCESSING'.
            03  FIL               PIC X(59)    VALUE '080000FOOD'.
            03  FIL               PIC X(59)    VALUE
                '090000GOVERNMENT, PUBLIC SERVICE'.
            03  FIL               PIC X(59)    VALUE '100000HEALTH CARE'.
            03  FIL               PIC X(59)    VALUE '110000INSURANCE'.
            03  FIL               PIC X(59)    VALUE '120000MANUFACTURING'.
            03  FIL               PIC X(59)    VALUE '130000PRINTING'.
            03  FIL               PIC X(59)    VALUE '140000PUBLIC UTILITY'.
            03  FIL               PIC X(59)    VALUE '150000SALES - RETAIL'.
            03  FIL               PIC X(59)    VALUE
                '160000SALES - WHOLESALE'.
            03  FIL               PIC X(59)    VALUE '170000STOCK BROKERS'.
            03  FIL               PIC X(59)    VALUE
                '180000TRANSPORTATION'.
            03  FIL               PIC X(59)    VALUE '190000MOTOR REPAIR'.
            03  FIL               PIC X(59)    VALUE '0100001-10'.
            03  FIL               PIC X(59)    VALUE '02000010-49'.
            03  FIL               PIC X(59)    VALUE '03000050-99'.
            03  FIL               PIC X(59)    VALUE '040000100-249'.
            03  FIL               PIC X(59)    VALUE '050000250-499'.
            03  FIL               PIC X(59)    VALUE '060000500-999'.
            03  FIL               PIC X(59)    VALUE '0700001000-5000'.
            03  FIL               PIC X(59)    VALUE '080000OVER 5000'.
            03  FIL               PIC X(59)    VALUE '010000LESS THAN 10 '.
            03  FIL               PIC X(59)    VALUE '02000011-25 '.
            03  FIL               PIC X(59)    VALUE '03000026-50 '.
            03  FIL               PIC X(59)    VALUE '040000OVER 50 '.
            03  FIL               PIC X(59)    VALUE '010000LESS THAN 10 '.
            03  FIL               PIC X(59)    VALUE '02000011-25 '.
            03  FIL               PIC X(59)    VALUE '03000026-50 '.
            03  FIL               PIC X(59)    VALUE '040000OVER 50 '.
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       03  FIL                 PIC X(59)   VALUE '010000LESS THAN 10 '.
       03  FIL                 PIC X(59)   VALUE '02000011-25 '.
       03  FIL                 PIC X(59)   VALUE '03000026-50 '.
       03  FIL                 PIC X(59)   VALUE '040000OVER 50 '.
       03  FIL                 PIC X(59)   VALUE '010000LESS THAN 10 '.
       03  FIL                 PIC X(59)   VALUE '02000011-25 '.
       03  FIL                 PIC X(59)   VALUE '03000026-50 '.
       03  FIL                 PIC X(59)   VALUE '040000OVER 50 '.
       03  FIL                 PIC X(59)   VALUE '010000LESS THAN 10 '.
       03  FIL                 PIC X(59)   VALUE '02000011-25 '.
       03  FIL                 PIC X(59)   VALUE '03000026-50 '.
       03  FIL                 PIC X(59)   VALUE '040000OVER 50 '.
       03  FIL                 PIC X(59)   VALUE '010000LESS THAN 10 '.
       03  FIL                 PIC X(59)   VALUE '02000011-25 '.
       03  FIL                 PIC X(59)   VALUE '03000026-50 '.
       03  FIL                 PIC X(59)   VALUE '040000OVER 50 '.
       03  FIL                 PIC X(59)   VALUE '010000LESS THAN 10 '.
       03  FIL                 PIC X(59)   VALUE '02000011-25 '.
       03  FIL                 PIC X(59)   VALUE '03000026-50 '.
       03  FIL                 PIC X(59)   VALUE '040000OVER 50 '.
       03  FIL                 PIC X(59)   VALUE '010000LESS THAN 10 '.
       03  FIL                 PIC X(59)   VALUE '02000011-25 '.
       03  FIL                 PIC X(59)   VALUE '03000026-50 '.
       03  FIL                 PIC X(59)   VALUE '040000OVER 50 '.
       03  FIL                 PIC X(59)   VALUE '010000LESS THAN 10 '.
       03  FIL                 PIC X(59)   VALUE '02000011-25 '.
       03  FIL                 PIC X(59)   VALUE '03000026-50 '.
       03  FIL                 PIC X(59)   VALUE '040000OVER 50 '.
       03  FIL                 PIC X(59)   VALUE
           '010000MANAGERS AND OFFICALS'.
       03  FIL                 PIC X(59)   VALUE '020000PROFESSIONALS'.
       03  FIL                 PIC X(59)   VALUE '030000TECHNICIANS'.
       03  FIL                 PIC X(59)   VALUE '040000SALES'.
       03  FIL                 PIC X(59)   VALUE
           '050000OFFICE AND CLERICAL[illegible]
       03  FIL                 PIC X(59)   VALUE '060000CRAFTSMEN'.
       03  FIL                 PIC X(59)   VALUE '070000OPERATIVES'.
       03  FIL                 PIC X(59)   VALUE '080000LABORERS'.
       03  FIL                 PIC X(59)   VALUE
           '090000SERVICE WORKERS'.
       03  FIL                 PIC X(59)   VALUE
           '010000MANAGERS AND OFFICALS'.
       03  FIL                 PIC X(59)   VALUE '020000PROFESSIONALS'.
       03  FIL                 PIC X(59)   VALUE '030000TECHNICIANS'.
       03  FIL                 PIC X(59)   VALUE '0400[illegible]ES'.
       03  FIL                 PIC X(59)   VALUE
           '050000OFFICE AND CLERICAL'.
       03  FIL                 PIC X(59)   VALUE '060000CRAFTSMEN'.
       03  FIL                 PIC X(59)   VALUE '070000OPERATIVES'.
       03  FIL                 PIC X(59)   VALUE '080000LABORERS'.
       03  FIL                 PIC X(59)   VALUE
           '090000SERVICE WORKERS'.
       03  FIL                 PIC X(59)   VALUE '010000YES'.
       03  FIL                 PIC X(59)   VALUE '020000NO'.
       03  FIL                 PIC X(59)   VALUE '010000YES'.
       03  FIL                 PIC X(59)   VALUE '020000NO'.
       03  FIL                 PIC X(59)   VALUE
           '030000NEVER EMPLOYED STC GRADUATES'.
       03  FIL                 PIC X(59)   VALUE '010000ACCOUNTING'.
       03  FIL                 PIC X(59)   VALUE '020000AUTOMOTIVE'.
```

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03  FIL               PIC X(59)   VALUE
    '030000BANKING/FINANCE'.
03  FIL               PIC X(59)   VALUE
    '040000BUSINESS MANAGEMENT'.
03  FIL               PIC X(59)   VALUE
    '050000CIVIL CONSTRUCTION'.
03  FIL               PIC X(59)   VALUE
    '060000COMPUTER PROGRAMMING'.
03  FIL               PIC X(59)   VALUE
    '070000COURT/CONFERENCE REPORTING'.
03  FIL               PIC X(59)   VALUE
    '080000DRAFTING AND DESIGN'.
03  FIL               PIC X(59)   VALUE
    '090000ELECTRICAL ENGINEERING TECHNOLOGY'.
03  FIL               PIC X(59)   VALUE
    '100000ELECTRONIC ENGINEERING TECHNOLOGY'.
03  FIL               PIC X(59)   VALUE
    '110000ENGINEERING MODELING'.
03  FIL               PIC X(59)   VALUE
    '120000EXECUTIVE SECRETARIAL SCIENCE'.
03  FIL               PIC X(59)   VALUE
    '130000FIRE SCIENCE'.
03  FIL               PIC X(59)   VALUE
    '140000LEGAL SECRETARIAL SCIENCE'.
03  FIL               PIC X(59)   VALUE
    '150000MECHANICAL ENGR. TECHNOLOGY'.
03  FIL               PIC X(59)   VALUE
    '160000MEDICAL ASSISTING'.
03  FIL               PIC X(59)   VALUE
    '170000MEDICAL RECORDS'.
03  FIL               PIC X(59)   VALUE
    '180000PROPERTY MANAGEMENT/REAL ESTATE'.
03  FIL               PIC X(59)   VALUE
    '190000RESTAURANT AND FOOD MANAGEMENT'.
03  FIL               PIC X(59)   VALUE
    '200000RETAIL MARKETING'.
03  FIL               PIC X(59)   VALUE '010000ACCOUNTING'.
03  FIL               PIC X(59)   VALUE '020000AUTOMOTIVE'.
03  FIL               PIC X(59)   VALUE
    '030000BANKING/FINANCE'.
03  FIL               PIC X(59)   VALUE
    '040000BUSINESS MANAGEMENT'.
03  FIL               PIC X(59)   VALUE
    '050000CIVIL CONSTRUCTION'.
03  FIL               PIC X(59)   VALUE
    '060000COMPUTER PROGRAMMING'.
03  FIL               PIC X(59)   VALUE
    '070000COURT/CONFERENCE REPORTING'.
03  FIL               PIC X(59)   VALUE
    '080000DRAFTING AND DESIGN'.
03  FIL               PIC X(59)   VALUE
    '090000ELECTRICAL ENGINEERING TECHNOLOGY'.
03  FIL               PIC X(59)   VALUE
    '100000ELECTRONIC ENGINEERING TECHNOLOGY'.
03  FIL               PIC X(59)   VALUE
    '110000ENGINEERING MODELING'.
03  FIL               PIC X(59)   VALUE
    '120000EXECUTIVE SECRETARIAL SCIENCE'.
03  FIL               PIC X(59)   VALUE
    '130000FIRE SCIENCE'.
```

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03  FIL                PIC X(59)    VALUE
    '140000LEGAL SECRETARIAL SCIENCE'.
03  FIL                PIC X(59)    VALUE
    '150000MECHANICAL ENGR. TECHNOLOGY'.
03  FIL                PIC X(59)    VALUE
    '160000MEDICAL ASSISTING'.
03  FIL                PIC X(59)    VALUE
    '170000MEDICAL RECORDS'.
03  FIL                PIC X(59)    VALUE
    '180000PROPERTY MANAGEMENT/REAL ESTATE'.
03  FIL                PIC X(59)    VALUE
    '190000RESTAURANT AND FOOD MANAGEMENT'.
03  FIL                PIC X(59)    VALUE
    '200000RETAIL MARKETING'.
03  FIL                PIC X(59)    VALUE '010000ACCOUNTING'.
03  FIL                PIC X(59)    VALUE '020000AUTOMOTIVE'.
03  FIL                PIC X(59)    VALUE
    '030000BANKING/FINANCE'.
03  FIL                PIC X(59)    VALUE
    '040000BUSINESS MANAGEMENT'.
03  FIL                PIC X(59)    VALUE
    '050000CIVIL CONSTRUCTION'.
03  FIL                PIC X(59)    VALUE
    '060000COMPUTER PROGRAMMING'.
03  FIL                PIC X(59)    VALUE
    '070000COURT/CONFERENCE REPORTING'.
03  FIL                PIC X(59)    VALUE
    '080000DRAFTING AND DESIGN'.
03  FIL                PIC X(59)    VALUE
    '090000ELECTRICAL ENGINEERING TECHNOLOGY'.
03  FIL                PIC X(59)    VALUE
    '100000ELECTRONIC ENGINEERING TECHNOLOGY'.
03  FIL                PIC X(59)    VALUE
    '110000ENGINEERING MODELING'.
03  FIL                PIC X(59)    VALUE
    '120000EXECUTIVE SECRETARIAL SCIENCE'.
03  FIL                PIC X(59)    VALUE
    '130000FIRE SCIENCE'.
03  FIL                PIC X(59)    VALUE
    '140000LEGAL SECRETARIAL SCIENCE'.
03  FIL                PIC X(59)    VALUE
    '150000MECHANICAL ENGR. TECHNOLOGY'.
03  FIL                PIC X(59)    VALUE
    '160000MEDICAL ASSISTING'.
03  FIL                PIC X(59)    VALUE
    '170000MEDICAL RECORDS'.
03  FIL                PIC X(59)    VALUE
    '180000PROPERTY MANAGEMENT/REAL ESTATE'.
03  FIL                PIC X(59)    VALUE
    '190000RESTAURANT AND FOOD MANAGEMENT'.
03  FIL                PIC X(59)    VALUE
    '200000RETAIL MARKETING'.
03  FIL                PIC X(59)    VALUE
    '010000STRONGLY APPROVE'.
03  FIL                PIC X(59)    VALUE '020000APPROVE'.
03  FIL                PIC X(59)    VALUE '030000NEUTRAL'.
03  FIL                PIC X(59)    VALUE '040000DISAPPROVE'.
03  FIL                PIC X(59)    VALUE
    '050000STRONGLY DISAPPROVE'.
03  FIL                PIC X(59)    VALUE
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               '010000YOU GRADUATED FROM STC'.
           03  FIL                PIC X(59)   VALUE
               '020000YOUR EMPLOYEES GRADUATED FROM STC'.
           03  FIL                PIC X(59)   VALUE
               '030000YOU ATTENDED COURSES/SEMINARS AT STC'.
           03  FIL                PIC X(59)   VALUE
               '040000YOUR EMPLOYEES ATTENDED COURSES/SEMINARS AT STC'.
           03  FIL                PIC X(59)   VALUE
               '050000YOUR CHILDREN/RELATIVES ATTENDED STC'.
           03  FIL                PIC X(59)   VALUE
               '060000PUBLICITY/PROMOTIONAL MATERIALS'.
           03  FIL                PIC X(59)   VALUE
               '070000YOU HEARD ABOUT STC FROM OTHER PEOPLE'.
           03  FIL                PIC X(59)   VALUE '080000OTHER'.
           03  FIL                PIC X(59)   VALUE '010000YES'.
           03  FIL                PIC X(59)   VALUE '020000NO'.
       01  A-TABLE REDEFINES TABLE-A.
           03  ITEM OCCURS 161 TIMES.
               05  ANSWER         PIC 99.
               05  SUM            PIC 9(4).
               05  DESC           PIC X(53).
       01  TABLE-B.
           03  FIL                PIC X(40)   VALUE
               '0010000ADVERTISING/PUBLIC RELATIONS'.
           03  FIL                PIC X(40)   VALUE
               '0020000AGRICULTURAL BUSINESS'.
           03  FIL                PIC X(40)   VALUE
               '0030000AGRICULTURAL COMMUNICATIONS'.
           03  FIL                PIC X(40)   VALUE
               '0040000AGRICULTURAL MATERIAL HANDLING'.
           03  FIL                PIC X(40)   VALUE
               '0050000AGRICULTURAL MACHINERY'.
           03  FIL                PIC X(40)   VALUE
               '0060000AGRICULTURAL PRODUCTION'.
           03  FIL                PIC X(40)   VALUE
               '0070000AGRICULTURAL RESEARCH'.
           03  FIL                PIC X(40)   VALUE
               '0080000AGRONOMIC BUSINESS'.
           03  FIL                PIC X(40)   VALUE
               '0090000ALCOHOLIC REHABILITATION SERVICES'.
           03  FIL                PIC X(40)   VALUE
               '0100000ANIMAL HEALTH ASSISTING'.
           03  FIL                PIC X(40)   VALUE '0110000ARCHITECTURAL'.
           03  FIL                PIC X(40)   VALUE
               '0120000ART AND DESIGN'.
           03  FIL                PIC X(40)   VALUE '0130000AVIATION'.
           03  FIL                PIC X(40)   VALUE
               '0140000AVIATION MANAGEMENT'.
           03  FIL                PIC X(40)   VALUE '0150000AVIONICS'.
           03  FIL                PIC X(40)   VALUE
               '0160000BIOMEDICAL EQUIPMENT'.
           03  FIL                PIC X(40)   VALUE
               '0170000BROADCASTING'.
           03  FIL                PIC X(40)   VALUE
               '0180000BUILDING INSPECTION'.
           03  FIL                PIC X(40)   VALUE '0190000CERAMICS'.
           03  FIL                PIC X(40)   VALUE
               '0200000COMMERCIAL ART'.
           03  FIL                PIC X(40)   VALUE
               '0210000COMMERCIAL BEEKEEPING'.
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03  FIL             PIC X(40)   VALUE '0220000CONCRETE'.
03  FIL             PIC X(40)   VALUE
    '0230000CONSUMER CREDIT MANAGEMNET'.
03  FIL             PIC X(40)   VALUE '0240000CORRECTIONS'.
03  FIL             PIC X(40)   VALUE
    '0250000CROP MANAGEMENT'.
03  FIL             PIC X(40)   VALUE
    '0260000DAIRY CATTLE PRODUCTION'.
03  FIL             PIC X(40)   VALUE
    '0270000DATA CENTER MANAGEMENT'.
03  FIL             PIC X(40)   VALUE
    '0280000DENTAL ASSISTING'.
03  FIL             PIC X(40)   VALUE
    '0290000DENTAL HYGIENE'.
03  FIL             PIC X(40)   VALUE
    '0300000DENTAL LABORATORY'.
03  FIL             PIC X(40)   VALUE '0310000DIESEL'.
03  FIL             PIC X(40)   VALUE '0320000DIETETIC'.
03  FIL             PIC X(40)   VALUE
    '0330000EARLY CHILDHOOD DEVELOPMENT'.
03  FIL             PIC X(40)   VALUE
    '0340000EDUCATIONAL ASSISTING'.
03  FIL             PIC X(40)   VALUE
    '0350000EDUCATIONAL SERVICES'.
03  FIL             PIC X(40)   VALUE
    '0360000ELECTRIC POWER'.
03  FIL             PIC X(40)   VALUE
    '0370000ELECTRO-MECHANICAL'.
03  FIL             PIC X(40)   VALUE '0380000ELECTROGRAPHY'.
03  FIL             PIC X(40)   VALUE
    '0390000EMERGENCY MEDICAL'.
03  FIL             PIC X(40)   VALUE '0400000ENERGY'.
03  FIL             PIC X(40)   VALUE
    '0410000ENERGY MANAGEMENT'.
03  FIL             PIC X(40)   VALUE
    '0420000ENVIRONMENTAL PROTECTION'.
03  FIL             PIC X(40)   VALUE
    '0430000ENVIRONMENTAL SCIENCE'.
03  FIL             PIC X(40)   VALUE
    '0440000FARM MANAGEMENT'.
03  FIL             PIC X(40)   VALUE
    '0450000FARM MARKETING'.
03  FIL             PIC X(40)   VALUE
    '0460000FLORICULTURE AND FLORAL DESIGN'.
03  FIL             PIC X(40)   VALUE '0470000FLUID POWER'.
03  FIL             PIC X(40)   VALUE
    '0480000FOOD INDUSTRIES'.
03  FIL             PIC X(40)   VALUE
    '0490000GERIATRIC ASSISTING'.
03  FIL             PIC X(40)   VALUE '0500000GRAPHIC ARTS'.
03  FIL             PIC X(40)   VALUE '0510000HANDICAPPED'.
03  FIL             PIC X(40)   VALUE
    '0520000HEAT PRECESSING'.
03  FIL             PIC X(40)   VALUE
    '0530000HEATING AND AIR CONDITIONING'.
03  FIL             PIC X(40)   VALUE
    '0540000HIGHWAY DESIGN'.
03  FIL             PIC X(40)   VALUE '0550000HISTOLOGIC'.
03  FIL             PIC X(40)   VALUE
    '0560000HOUSEKEEPING MANAGEMENT'.
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03  FIL               PIC X(40)   VALUE
    '0570000INDUSTRIAL ENGINEERING'.
03  FIL               PIC X(40)   VALUE
    '0580000INDUSTRIAL GRAPHICS'.
03  FIL               PIC X(40)   VALUE
    '0590000INDUSTRIAL LABORATORY'.
03  FIL               PIC X(40)   VALUE
    '0600000INDUSTRIAL MANAGEMENT'.
03  FIL               PIC X(40)   VALUE
    '0610000INDUSTRIAL MARKETING'.
03  FIL               PIC X(40)   VALUE
    '0620000INDUSTRIAL AND OFF-HIGHWAY POWER'.
03  FIL               PIC X(40)   VALUE
    '0630000INSTRUMENTATION'.
03  FIL               PIC X(40)   VALUE '0640000INSURANCE'.
03  FIL               PIC X(40)   VALUE
    '0650000INTERIOR DESIGN'.
03  FIL               PIC X(40)   VALUE
    '0660000JIG/FIXTURE DESIGN'.
03  FIL               PIC X(40)   VALUE
    '0670000LAND STABLILZATION/RECLAMATION'.
03  FIL               PIC X(40)   VALUE
    '0680000LANDSCAPE/TURF MANAGEMENT'.
03  FIL               PIC X(40)   VALUE '0690000LASER OPTICS'.
03  FIL               PIC X(40)   VALUE
    '0700000LAW ENFORCEMENT'.
03  FIL               PIC X(40)   VALUE
    '0710000LEGAL ASSISTING'.
03  FIL               PIC X(40)   VALUE
    '0720000LIBRARY/INSTRUCTIONAL MEDIA'.
03  FIL               PIC X(40)   VALUE
    '0730000LIVESTOCK PRODUCTION'.
03  FIL               PIC X(40)   VALUE
    '0740000LOGISTICS MANAGEMENT'.
03  FIL               PIC X(40)   VALUE
    '0750000MANUFACTURING AND/OR INDUSTRIAL'.
03  FIL               PIC X(40)   VALUE
    '0760000MEDICAL LABORATORY'.
03  FIL               PIC X(40)   VALUE
    '0770000MEDICAL SECRETARIAL'.
03  FIL               PIC X(40)   VALUE
    '0780000MENTAL HEALTH ASSISTING'.
03  FIL               PIC X(40)   VALUE
    '0790000MICROPRECISION'.
03  FIL               PIC X(40)   VALUE '0800000MILLWRIGHT'.
03  FIL               PIC X(40)   VALUE '0810000MINING'.
03  FIL               PIC X(40)   VALUE
    '0820000MUNICIPAL WASTE DISPOSAL'.
03  FIL               PIC X(40)   VALUE
    '0830000NUCLEAR MEDICINE'.
03  FIL               PIC X(40)   VALUE
    '0840000NUCLEAR POWER'.
03  FIL               PIC X(40)   VALUE
    '0850000NUMERICAL CONTROL'.
03  FIL               PIC X(40)   VALUE
    '0860000NURSERY/GREENHOUSE MANAGEMENT'.
03  FIL               PIC X(40)   VALUE '0870000NURSING'.
03  FIL               PIC X(40)   VALUE
    '0880000OCCUPATIONAL THERAPY ASSISTING'.
03  FIL               PIC X(40)   VALUE
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        '0890000OPERATING ENGINEER'.
    03  FIL                PIC X(40)   VALUE
        '0900000OPTHALMIC DISPENSING'.
    03  FIL                PIC X(40)   VALUE
        '0910000OPTICAL MECHANICS'.
    03  FIL                PIC X(40)   VALUE
        '0920000OPTOMETRIC ASSISTING'.
    03  FIL                PIC X(40)   VALUE '0930000PACKAGING'.
    03  FIL                PIC X(40)   VALUE
        '0940000PARKS/RECREATION/WILDLIFE'.
    03  FIL                PIC X(40)   VALUE '0950000PETROLEUM'.
    03  FIL                PIC X(40)   VALUE '0960000PHARMACY'.
    03  FIL                PIC X(40)   VALUE '0970000PHOTOGRAPHY'.
    03  FIL                PIC X(40)   VALUE
        '0980000PHYSICAL THERAPY ASSISTING'.
    03  FIL                PIC X(40)   VALUE
        '0990000PLANT MAINTENANCE'.
    03  FIL                PIC X(40)   VALUE
        '1000000PLASTICS/CHEMICAL'.
    03  FIL                PIC X(40)   VALUE
        '1010000PRACTICAL NURSING'.
    03  FIL                PIC X(40)   VALUE
        '1020000PRODUCTION/INVENTORY CONTROL'.
    03  FIL                PIC X(40)   VALUE
        '1030000PUBLIC ADMINISTRATION'.
    03  FIL                PIC X(40)   VALUE '1040000PUBLIC HEALTH'.
    03  FIL                PIC X(40)   VALUE '1050000PURCHASING'.
    03  FIL                PIC X(40)   VALUE
        '1060000QUALITY CONTROL'.
    03  FIL                PIC X(40)   VALUE
        '1070000RADIATION THERAPY ASSISTING'.
    03  FIL                PIC X(40)   VALUE '1080000RADIOLOGIC'.
    03  FIL                PIC X(40)   VALUE
        '1090000RECREATIONAL THERAPY ASSISTING'.
    03  FIL                PIC X(40)   VALUE
        '1100000REGIONAL PLANNING'.
    03  FIL                PIC X(40)   VALUE
        '1110000RESPIRATORY THERAPY'.
    03  FIL                PIC X(40)   VALUE
        '1120000RESPIRATORY THERAPY ASSISTING'.
    03  FIL                PIC X(40)   VALUE
        '1130000SAFETY/RISK MANAGEMENT'.
    03  FIL                PIC X(40)   VALUE
        '1140000SAVINGS AND LOAN MANAGEMENT'.
    03  FIL                PIC X(40)   VALUE
        '1150000SCIENTIFIC MEASUREMENT'.
    03  FIL                PIC X(40)   VALUE '1160000SECURITY'.
    03  FIL                PIC X(40)   VALUE
        '1170000SMALL BUSINESS MANAGEMENT'.
    03  FIL                PIC X(40)   VALUE
        '1180000SOCIAL SERVICES'.
    03  FIL                PIC X(40)   VALUE
        '1190000SOIL/ WATER MANAGEMENT'.
    03  FIL                PIC X(40)   VALUE '1200000SOLAR ENERGY'.
    03  FIL                PIC X(40)   VALUE
        '1210000STATIONARY ENGINEER'.
    03  FIL                PIC X(40)   VALUE '1220000SURVEYING'.
    03  FIL                PIC X(40)   VALUE
        '1230000TECHNICAL ILLUSTRATION'.
    03  FIL                PIC X(40)   VALUE
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               '1240000TOOL/DIE DESIGN'.
           03  FIL                PIC X(40)    VALUE
               '1250000TRAFFIC/TRANSPORTATION'.
           03  FIL                PIC X(40)    VALUE
               '1260000WELDING FABRICATION'.
       01  B-TABLE REDEFINES TABLE-B.
           03  ITEM OCCURS 126 TIMES.
               05  TECHNO         PIC 999.
               05  TECH-SUM       PIC 9(4).
               05  TECH-DESC      PIC X(33).
       PROCEDURE DIVISION.
       START-PROG.
           OPEN INPUT EM-FILE OUTPUT LIST-FILE.
           ACCEPT SYS-DATE FROM DATE.
           PERFORM HEADINGS.
       READ-EM.
           READ EM-FILE AT END GO TO WRITE-DETAIL.
       LOOKUP-BUS.
           ADD 1 TO SUB.
           IF EM-BUS1 = ANSWER (SUB) OR EM-BUS2 = ANSWER (SUB) OR
               EM-BUS3 = ANSWER (SUB) OR EM-BUS4 = ANSWER (SUB) OR
               EM-BUS5 = ANSWER (SUB) ADD 1 TO SUM (SUB).
           IF SUB = 19 GO TO LOOKUP-NOEMP.
           GO TO LOOKUP-BUS.
       LOOKUP-NOEMP.
           ADD 1 TO SUB.
           IF EM-NOEMP = ANSWER (SUB)
               ADD 1 TO SUM (SUB)
               MOVE 27 TO SUB
               GO TO LOOKUP-MANOFF.
           IF SUB = 27 GO TO LOOKUP-MANOFF.
           GO TO LOOKUP-NOEMP.
       LOOKUP-MANOFF.
           ADD 1 TO SUB.
           IF EM-MANOFF = ANSWER (SUB)
               ADD 1 TO SUM (SUB)
               MOVE 31 TO SUB
               GO TO LOOKUP-PROF.
           IF SUB = 31 GO TO LOOKUP-PROF.
           GO TO LOOKUP-MANOFF.
       LOOKUP-PROF.
           ADD 1 TO SUB.
           IF EM-PROF = ANSWER (SUB)
               ADD 1 TO SUM (SUB)
               MOVE 35 TO SUB
               GO TO LOOKUP-TECH.
           IF SUB = 35 GO TO LOOKUP-TECH.
           GO TO LOOKUP-PROF.
       LOOKUP-TECH.
           ADD 1 TO SUB.
           IF EM-TECH = ANSWER (SUB)
               ADD 1 TO SUM (SUB)
               MOVE 39 TO SUB
               GO TO LOOKUP-SALES.
           IF SUB = 39 GO TO LOOKUP-SALES.
           GO TO LOOKUP-TECH.
       LOOKUP-SALES.
           ADD 1 TO SUB.
           IF EM-SALES = ANSWER (SUB)
               ADD 1 TO SUM (SUB)
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        MOVE 43 TO SUB
        GO TO LOOKUP-OFFCLER.
    IF SUB = 43 GO TO LOOKUP-OFFCLER.
    GO TO LOOKUP-SALES.
LOOKUP-OFFCLER.
    ADD 1 TO SUB.
    IF EM-OFFCLER = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 47 TO SUB
        GO TO LOOKUP-CRAFT.
    IF SUB = 47 GO TO LOOKUP-CRAFT.
    GO TO LOOKUP-OFFCLER.
LOOKUP-CRAFT.
    ADD 1 TO SUB.
    IF EM-CRAFT = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 51 TO SUB
        GO TO LOOKUP-OPER.
    IF SUB = 51 GO TO LOOKUP-OPER.
    GO TO LOOKUP-CRAFT.
LOOKUP-OPER.
    ADD 1 TO SUB.
    IF EM-OPER = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 55 TO SUB
        GO TO LOOKUP-LABOR.
    IF SUB = 55 GO TO LOOKUP-LABOR.
    GO TO LOOKUP-OPER.
LOOKUP-LABOR.
    ADD 1 TO SUB.
    IF EM-LABOR = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 59 TO SUB
        GO TO LOOKUP-SERV.
    IF SUB = 59 GO TO LOOKUP-SERV.
    GO TO LOOKUP-LABOR.
LOOKUP-SERV.
    ADD 1 TO SUB.
    IF EM-SERV = ANSWER (SUB)
        ADD 1 TO SUM (SUB)
        MOVE 63 TO SUB
        GO TO LOOKUP-ADDEMP.
    IF SUB = 63 GO TO LOOKUP-ADDEMP.
    GO TO LOOKUP-SERV.
LOOKUP-ADDEMP.
    ADD 1 TO SUB.
    IF EM-ADDEMP1 = ANSWER (SUB) OR EM-ADDEMP2 = ANSWER (SUB) OR
        EM-ADDEMP3 = ANSWER (SUB) OR EM-ADDEMP4 = ANSWER (SUB)
        OR EM-ADDEMP5 = ANSWER (SUB) OR
        EM-ADDEMP6 = ANSWER (SUB) OR EM-ADDEMP7 = ANSWER (SUB)
        OR EM-ADDEMP8 = ANSWER (SUB) OR
        EM-ADDEMP9 = ANSWER (SUB) ADD 1 TO SUM (SUB).
    IF SUB = 72 GO TO LOOKUP-REDEMP.
    GO TO LOOKUP-ADDEMP.
LOOKUP-REDEMP.
    ADD 1 TO SUB.
    IF EM-REDEMP1 = ANSWER (SUB) OR EM-REDEMP2 = ANSWER (SUB) OR
        EM-REDEMP3 = ANSWER (SUB) OR EM-REDEMP4 = ANSWER (SUB) OR
        EM-REDEMP5 = ANSWER (SUB) OR EM-REDEMP6 = ANSWER (SUB) OR
        EM-REDEMP7 = ANSWER (SUB) OR EM-REDEMP8 = ANSWER (SUB) OR
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            EM-REDEMP9 = ANSWER (SUB) ADD 1 TO SUM (SUB).
        IF SUB = 81 GO TO LOOKUP-GRAD.
        GO TO LOOKUP-REDEMP.
    LOOKUP-GRAD.
        ADD 1 TO SUB.
        IF EM-GRAD = ANSWER (SUB)
            ADD 1 TO SUM (SUB)
            MOVE 83 TO SUB
            GO TO LOOKUP-SATISFY.
        IF SUB = 83 GO TO LOOKUP-SATISFY.
        GO TO LOOKUP-GRAD.
    LOOKUP-SATISFY.
        ADD 1 TO SUB.
        IF EM-SATISFY = ANSWER (SUB)
            ADD 1 TO SUM (SUB)
            MOVE 86 TO SUB
            GO TO LOOKUP-TEMP.
        IF SUB = 86 GO TO LOOKUP-TEMP.
        GO TO LOOKUP-SATISFY.
    LOOKUP-TEMP.
        ADD 1 TO SUB.
        IF EM-TEMP1 = ANSWER (SUB) OR EM-TEMP2 = ANSWER (SUB) OR
            EM-TEMP3 = ANSWER (SUB) OR EM-TEMP4 = ANSWER (SUB) OR
            EM-TEMP5 = ANSWER (SUB) ADD 1 TO SUM (SUB).
        IF SUB = 106 GO TO LOOKUP-TRED.
        GO TO LOOKUP-TEMP.
    LOOKUP-TRED.
        ADD 1 TO SUB.
        IF EM-TRED1 = ANSWER (SUB) OR EM-TRED2 = ANSWER (SUB) OR
            EM-TRED3 = ANSWER (SUB) OR EM-TRED4 = ANSWER (SUB) OR
            EM-TRED5 = ANSWER (SUB) ADD 1 TO SUM (SUB).
        IF SUB = 126 GO TO LOOKUP-TADD.
        GO TO LOOKUP-TRED.
    LOOKUP-TADD.
        ADD 1 TO SUB.
        IF EM-TADD1 = ANSWER (SUB) OR EM-TADD2 = ANSWER (SUB) OR
            EM-TADD3 = ANSWER (SUB) OR EM-TADD4 = ANSWER (SUB) OR
            EM-TADD5 = ANSWER (SUB) ADD 1 TO SUM (SUB).
        IF SUB = 146 GO TO LOOKUP-TYPEMP.
        GO TO LOOKUP-TADD.
    LOOKUP-TYPEMP.
        ADD 1 TO CTR.
        IF EM-TYPEMP1 = TECHNO (CTR) OR EM-TYPEMP2 = TECHNO (CTR) OR
            EM-TYPEMP3 = TECHNO (CTR) OR EM-TYPEMP4 = TECHNO (CTR) OR
            EM-TYPEMP5 = TECHNO (CTR) OR EM-TYPEMP6 = TECHNO (CTR) OR
            EM-TYPEMP7 = TECHNO (CTR) ADD 1 TO TECH-SUM (CTR).
        IF CTR = 126 MOVE 0 TO CTR GO TO LOOKUP-OPED.
        GO TO LOOKUP-TYPEMP.
    LOOKUP-OPED.
        ADD 1 TO SUB.
        IF EM-OPED = ANSWER (SUB)
            ADD 1 TO SUM (SUB)
            MOVE 151 TO SUB
            GO TO LOOKUP-BASIS.
        IF SUB = 151 GO TO LOOKUP-BASIS.
        GO TO LOOKUP-OPED.
    LOOKUP-BASIS.
        ADD 1 TO SUB.
        IF EM-BASIS = ANSWER (SUB)
            ADD 1 TO SUM (SUB)
            MOVE 159 TO SUB
            GO TO LOOKUP-SEMRS.
        IF SUB = 159 GO TO LOOKUP-SEMRS.
        GO TO LOOKUP-BASIS.
    LOOKUP-SEMRS.
        ADD 1 TO SUB.
        IF EM-SEMRS = ANSWER (SUB)
            ADD 1 TO SUM (SUB)
            MOVE 0 TO SUB
            GO TO READ-EM.
        IF SUB = 161 MOVE 0 TO SUB GO TO READ-EM.
        GO TO LOOKUP-SEMRS.
    WRITE-DETAIL.
        ADD 1 TO SUB.
        IF SUB = 1 WRITE LIST FROM H-3 AFTER ADVANCING 2.
        IF SUB = 20 WRITE LIST FROM H-4 AFTER ADVANCING 2.
        IF SUB = 28 WRITE LIST FROM H-5 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 32 WRITE LIST FROM H-6 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 36 WRITE LIST FROM H-7 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 40 WRITE LIST FROM H-8 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 44 PERFORM HEADINGS
            WRITE LIST FROM H-9 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 48 WRITE LIST FROM H-10 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 52 WRITE LIST FROM H-11 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 56 WRITE LIST FROM H-12 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 60 WRITE LIST FROM H-13 AFTER ADVANCING 2
            WRITE LIST FROM H-25 AFTER ADVANCING 1.
        IF SUB = 64 WRITE LIST FROM H-14 AFTER ADVANCING 2.
        IF SUB = 73 WRITE LIST FROM H-15 AFTER ADVANCING 2.
        IF SUB = 82 PERFORM HEADINGS
            WRITE LIST FROM H-16 AFTER ADVANCING 2.
        IF SUB = 84 WRITE LIST FROM H-17 AFTER ADVANCING 2.
        IF SUB = 87 WRITE LIST FROM H-18 AFTER ADVANCING 2.
        IF SUB = 107 WRITE LIST FROM H-19 AFTER ADVANCING 2.
        IF SUB = 127 PERFORM HEADINGS
            WRITE LIST FROM H-20 AFTER ADVANCING 2.
        IF SUB = 147 WRITE LIST FROM H-21 AFTER ADVANCING 2
            PERFORM WRITE-TECH THRU TECH-EXIT
            WRITE LIST FROM H-22 AFTER ADVANCING 2.
        IF SUB = 152 WRITE LIST FROM H-23 AFTER ADVANCING 2.
        IF SUB = 160 WRITE LIST FROM H-24 AFTER ADVANCING 2.
        IF SUB = 162 GO TO EOJ.
        MOVE SUM (SUB) TO SUM-OUT.
        MOVE DESC (SUB) TO DESC-OUT.
        WRITE LIST FROM DETAIL AFTER ADVANCING 1.
        GO TO WRITE-DETAIL.
    WRITE-TECH.
        ADD 1 TO CTR.
        IF CTR = 36 OR CTR = 93 PERFORM HEADINGS
            WRITE LIST FROM H-21 AFTER ADVANCING 2.
        MOVE TECH-SUM (CTR) TO SUM-OUT.
        MOVE TECH-DESC (CTR) TO DESC-OUT.
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           WRITE LIST FROM DETAIL AFTER ADVANCING 1.
           IF CTR = 126 GO TO TECH-EXIT.
           GO TO WRITE-TECH.
       HEADINGS.
           MOVE SPACES TO LIST.
           WRITE LIST AFTER ADVANCING PAGE.
           ADD 1 TO PAGE-CTR.
           MOVE PAGE-CTR TO PAGE-OUT.
           MOVE MONTH TO MO-OUT.
           MOVE DAY TO DA-OUT.
           MOVE YEAR TO YR-OUT.
           WRITE LIST FROM H-1 AFTER ADVANCING 1.
           WRITE LIST FROM H-2 AFTER ADVANCING 1.
       TECH-EXIT.
           EXIT.
       EOJ.
           CLOSE EM-FILE LIST-FILE.
           STOP RUN.
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```

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